# CHURCHILL TANKS

TANK CRAFT

## BRITISH ARMY
## NORTH-WEST EUROPE 1944-1945

Dennis Oliver

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*Tanks of 6th Guards Armoured Brigade photographed in Kieve, east of Nijmegen, on 12 February 1945. The lead vehicle is a Churchill Mk IV armed with the OQF 6pdr Mk 5 gun fitted with a counterweight at the end of the barrel. The second tank in line is a Mk IV (75mm) easily identified by the gun's distinctive muzzle brake. These vehicles are almost certainly from 4th Battalion Coldstream Guards and a name, unfortunately indecipherable, is just visible on the air intake of the nearest tank.*

**TankCraft 4**



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**Dennis Oliver**

First published in Great Britain in 2017 by Pen & Sword Military

An imprint of Pen & Sword Books Ltd

47 Church Street, Barnsley, South Yorkshire, S70 2AS

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ISBN 152 671 889

eISBN 978 152 671 007 9

Mobi ISBN 978 152 671 006 2

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## INTRODUCTION

From the end of the First World War and the formation of the Royal Tank Corps in 1919, British military thinkers, strategists and politicians argued over the role that armoured vehicles would play in any future conflict. By any measure the first tanks had been a contributing factor in breaking the stalemate on the Western Front and by the last year of the war carefully planned and co-ordinated operations utilising large armoured formations with infantry, artillery and air support were becoming commonplace. In the post-war world, however, no one was exactly sure as to how the five remaining battalions of the Royal Tank Corps would be employed or how they should be equipped. That these battalions had been busily developing the tactics of mobile warfare seems to have had little, if any, effect on the debate.

Guided by hindsight it is easy to believe that the outbreak of the Second World War was somehow inevitable but it should be remembered that in the Britain of the 1920s most of the nation's political leaders considered the possibility of another major European war within the space of a single generation unlikely, if not impossible. If one were to accept this view then the British Army's role, in the near future at least, would surely be restricted to what was essentially colonial policing, as it had been before 1914.

Reading the literature of the time, both official and anecdotal, one almost feels that the army had come to accept the existence of the Royal Tank Corps, for the most part grudgingly, and so something had to be found for it to do. The consensus of opinion among most senior officers was that the tank would be best employed in supporting the infantry and the role of exploiting any resulting breakthrough should then be left to the cavalry. The government was quick to accept what seemed to be a tidy solution to the debate and thus, by 1933, the concept of the Infantry Tank was born (1).

*A busy workshop in northern France photographed during late 1944. Closest to the camera are two Churchill Mk IV AVRE tanks and behind those can be seen a Mk III fitted with the Ordnance QF (quick firing) 75mm gun. Behind the Churchills are a number of Sherman tanks and at least one Cromwell.*

The question of how best to equip the proposed tank battalions and brigades was never satisfactorily addressed and this was due, once again, to the conflicting schools of thought within the army, the government of the day and the armaments industry. Many felt that the deployment of vast numbers of fast, small vehicles, which would prove difficult to hit, was the best way to support an infantry assault while others suggested that a vehicle capable of protecting the infantry from the enemy's tanks was called for. The latter, of course, meant the development of a flat-trajectory weapon capable of penetrating the armour of most tanks then in service. Proposals drawing on the experience of the First World War recommended a tank with good trenchcrossing ability and heavy armour, armed with a gun which could neutralise enemy strongpoints and fortifications (2). The advocates of small, heavily-armoured tanks initially prevailed and the first Infantry Tank was the diminutive

A11, or Infantry Tank Mark I, which came into service in 1937, carrying just two men and armed with a single machine gun. These early tanks were in effect little more than heavily-armoured, mobile pillboxes. This was followed in early 1939 by the Infantry Tank Mark II, better known as the Matilda. In July of the same year design work began on the Infantry Tank Mark III, or Valentine, and as the war began in September 1939 work had begun on another new vehicle, designated the A20, which would eventually enter production as the Churchill.

**Notes**

1. This was not a peculiarly British innovation and tank design within the French army was proceeding along similar lines. Within the armies of the future combatants only a very few relatively junior officers advocated the doctrine of fast-moving armoured formations working closely with mobile infantry units, supported by airpower in place of the slow-moving artillery. That the Germans developed this into official policy was due in large part to Hitler's attraction to any form of gimmickry.

2. It seems almost incredible today that the idea of a multi-purpose gun capable of firing both high explosive and armour-piercing rounds was not explored and would not enter service until late 1942 with the introduction of the American Sherman.

## *CHURCHILL UNIT TANK STRENGTHS, JUNE 1944*

| Unit | Mk III | Mk IV | Mk IV OP | Mk VI | Mk VII | Mk V or VIII 95mm | ARV Mk I | Bridgelayer | 75mm Conv*** |
|---|---|---|---|---|---|---|---|---|---|
| 6th Guards Tank Brigade | - | 156 | 8 | - | - | 18 | 11 | 3 | 164 |
| 31st Tank Brigade | 60 | 12 | 8 | 31 | - | 18 | 11 | 1 | 34 |
| 141st Regiment, RAC * | - | 7 | - | - | 45 | - | - | - | 7 |
| 34th Tank Brigade | 90 | 18 | 8 | 24 | 24 | 18 | 11 | 2 | 59 |
| 1st Assault Regiment, RE ** | | | | | | | 15 | | |
| Total | 150 | 193 | 24 | 55 | 69 | 54 | 48 | 6 | 264 |
| Unit Establishment | 150 | 193 | 24 | 56 | 69 | 54 | 48 | 9 | - |
| Unit Reserves, Authorised | - | 49 | - | 30 | 44 | 15 | 6 | 3 | - |
| Armoured Replacement Group | - | 49 | - | 30 | 44 | 15 | 5 | - | 122 |

** 141st RAC was attached to 31st Tank Brigade but is shown separately as most of the regiment's tanks were Crocodile flamethowers, presumably the 45 Mk VII vehicles.*

*** Complete figures for 1st Assault Regiment are not shown as this chart was compiled from available RAC returns which did not apparently include vehicles allocated to the Royal Engineers. An authorised table of organisation for this regiment is shown on page 58.*

**** Conversion kits to fit the 75mm gun are listed separately. Note that the Guards and 141st RAC held enough to refit all their gun tanks.*

In many ways reminiscent of the tanks of the First World War the A20 was characterised by a large longitudinal frame with the tank's tracks running around the top of the hull. The prototypes, produced by Harland and Wolff Limited, were armed with two 2pdr guns fitted to sponsons on the vehicle's side, each with a coaxial BESA machine gun. However, the hull sponsons were very quickly dropped and a turret, based on the design of the A12 Matilda and mounting a single 2pdr gun, was introduced.

During development the possibility of supplementing the turret gun by replacing the hull machine gun with either a British 6pdr or a French 75mm gun was explored and a 3in howitzer was eventually chosen. As the 300 hp engines fitted to the test vehicles were considered underpowered for such a heavy tank, the firm of Vauxhall was approached to supply an alternative and in an effort to speed production, as almost every facet of the Churchill's development was, an engine based on the company's Bedford six-cylinder lorry was used.

The solution to the underpowered engine coincided almost exactly with the British Army's withdrawal from the continent where the tanks and other heavy equipment of the BEF had either been abandoned or destroyed meaning that Britain was now largely undefended (1).

Due to the counsel of Dr Henry Merritt, the Director of Tank Design at Woolwich Arsenal, and the initiative of Vauxhall's designers the original concept was pared back to create a tank which needed to be available to front-line units within twelve months, an incredibly short period of time in terms of armoured vehicle production. The official designation of the re-designed vehicle was A22 and in June 1941, by now christened Churchill, the first of the new tanks left the production lines.

The haste with which the Churchill had been designed and built ensured that mechanical and technical problems were inevitable and each tank was accompanied by a user's handbook prepared by Vauxhall which quite openly and honestly detailed the known faults (2). Most of the problems that Vauxhall were able to identify were, however, remedied over time. Some complications inherent in the tank's design were not so easily rectified and the crews found that maintenance was difficult and time consuming requiring the checking and greasing of the tank's twenty-two bogies, usually in darkness after moving or fighting for most of the day. The noise level within the tank, caused by the arrangement of the tracks, and the inability of the extractor fans to clear the fighting compartment of fumes were also concerns which were never eradicated. However, the best armoured vehicles are not without their defects and whatever shortcomings the Churchill may have had it was appreciated by its crews who valued its thick armour, its ability to climb seemingly insurmountable obstacles and to negotiate the muddiest fields or forest tracks as it proved in early 1945 during the battles in the Reichswald. By the time of the Normandy landings in June 1944 the Churchill equipped three army Tank Brigades and the 1st Assault Brigade of 79th Armoured Division, the latter made up of volunteer crews of the Royal Engineers.

Although often compared unfavourably to the Sherman, which equipped most of the armoured brigades, the Churchill's strength lay in its versatility, with a number of specialist vehicles contributing greatly to the success of the D-Day landings and another variant, the Crocodile flamethrower, taking part in every

major action of the campaign in North-west Europe. These are discussed further in the technical section which begins on page 59.

**Notes**

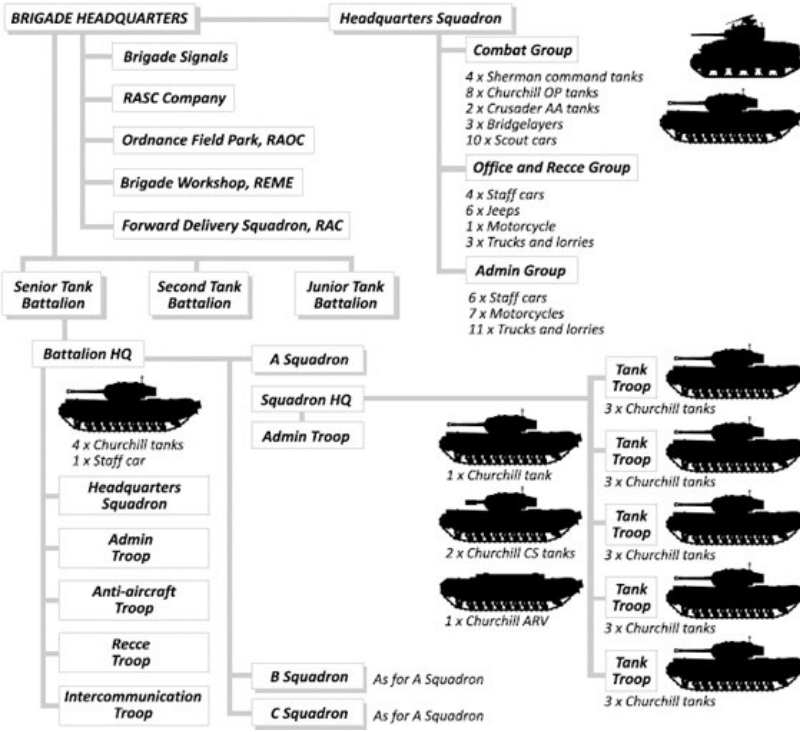
1. In addition to this the experiences of armoured warfare in Poland and across the fields of northern France had demonstrated that this war would be decidedly different from the last and the requirements which had brought the A20 into existence were no longer relevant.

2. Not least of these was the unreliability of the engine and it was only the timely performance of the Churchill Mk III tanks of Kingforce at El Alamein in late October 1942 that helped to ensure that production would continue at a time when the Cromwell was considered by many to be a safer bet.

## *BRITISH ARMY TANK BRIGADE, 6 JUNE 1944*

*The squadrons of the Churchill tank brigades contained five troops and each squadron headquarters was allocated two close support (CS) tanks armed with the 95mm gun. Each battalion contained eleven light tanks in their reconnaissance units which were either the M5 or M5A1 tank, referred to as Stuart V and Stuart VI respectively by the British. The six anti-aircraft tanks were based on the Crusader and most were transferred to infantry formations as the campaign progressed although a number of armoured formations retained theirs by simply claiming to have had none. The mission of the independent tank brigades conformed to the doctrine of the Infantry Tank where battalions, squadrons, troops and even individual tanks were allocated to infantry formations as the need arose and the brigades seldom fought as a single unit. The organisation shown here is the official establishment and a comparison should be made with the diagram on page 11, which is based on the*

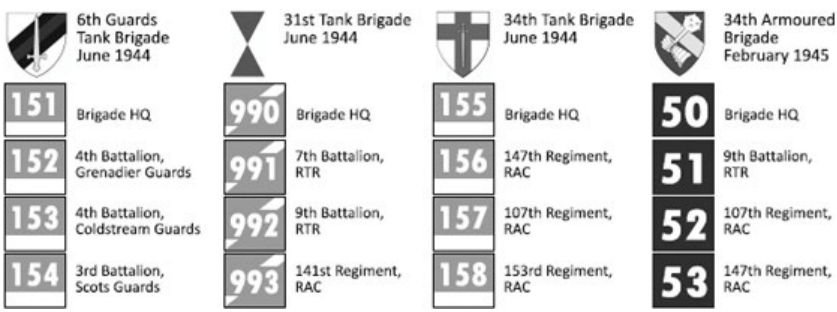
*actual vehicles on hand.*




*The Troops were numbered sequentially throughout the battalion or regiment. That is, the battalion's A Squadron contained Troops 1-5 while B Squadron was made up of Troops 6-10 and C Squadron had Troops 11-15. Note that within the Guards battalions the squadrons were referred to as 1st, 2nd and 3rd.*

*In all brigades at this time the command tanks were Sherman V and the OP tanks were Churchill Mk IV. This could of course have changed as the campaign progressed and tanks were lost and replacements were received. Three of the Admin Group's staff cars were two-seater models.*

*In late January 1944 and early February1945 a new organisation replaced the existing structure throughout the army and all brigades made up of units of the Royal Armoured Corps were from that time officially referred to as Armoured Brigades. These brigades could be either a Type A, which contained an infantry motor battalion and was permanently attached to a division, or a Type B which was independent and had no infantry element. The varied arm of service and unit serial number markings were to follow the system used by those brigades attached to divisions where the sequence 50 to 53 identified the brigade headquarters, the senior regiment, the second senior regiment and the junior regiment respectively. All were to be rendered in white on a red square. This order was not strictly adhered to, however, and examples are shown in the illustration section.*


6th Guards Tank Brigade June 1944
151 Brigade HQ
152 4th Battalion, Grenadier Guards
153 4th Battalion, Coldstream Guards
154 3rd Battalion, Scots Guards
31st Tank Brigade June 1944
990 Brigade HQ
991 7th Battalion, RTR
992 9th Battalion, RTR
993 141st Regiment, RAC
34th Tank Brigade June 1944
155 Brigade HQ
156 147th Regiment, RAC
157 107th Regiment, RAC
158 153rd Regiment, RAC
34th Armoured Brigade February 1945
50 Brigade HQ
51 9th Battalion, RTR
52 107th Regiment, RAC
53 147th Regiment, RAC

## THE ARMY TANK BRIGADES

The organisation of the tank brigades differed from the armoured brigades, officially at least, in not containing an integral infantry battalion. In June 1944 the tank brigades operating in Normandy, or waiting in England to be transported to France, were all equipped with Churchill tanks while the armoured brigades, were armed with the American Sherman. The single exception to this rule during the campaign in northern Europe was 22nd Armoured Brigade of 7th Armoured Division which was equipped, for the most part, with the Cromwell tank, the penultimate design in the Cruiser series. Unlike the armoured brigades, the Churchill squadrons of the tank brigades contained five troops and each squadron headquarters was allocated two close support tanks armed with the 95mm gun. The regiments of both types of brigade contained light tanks in their reconnaissance units and a number of anti-aircraft tanks, many of which were transferred to infantry formations as the campaign progressed. Some armoured brigades were attached to armoured divisions, but the mission of the independent formations was essentially the same, conforming to the doctrine of the Infantry Tank where regiments, squadrons and even troops were allocated to support infantry formations as the need arose. In late January 1945 a new organisation replaced the existing structure throughout the army and all brigades made up of units of the Royal Armoured Corps were from that time officially referred to as Armoured Brigades. These brigades could be either a Type A, which contained an infantry motor battalion and was permanently attached to a division, or a Type B which was independent and had no infantry element. The reader should note that when regiments or battalions are first mentioned I have endeavoured to use their full and correct titles as they were during the 1939-45 period. Subsequently they are referred to by generally-accepted abbreviations. As sources sometimes differ, I have employed the names given in Regulations for the Clothing of the Army, published in 1936 and amendments including that of October 1939. In the case of units raised during the war I have referred, wherever possible, to regimental histories.

## *6TH GUARDS TANK BRIGADE*

Formed in September 1941 at the same time as 5th Guards Armoured Brigade, it was originally intended that these two formations form part of a Guards Armoured Division. It was very quickly realised, however, that the two-brigade armoured divisions were far too unwieldy and 6th Guards Armoured Brigade was detached and initially subordinated to 15th (Scottish) Division (1). This was in line with experimentation carried out during 1943 with mixed divisions with the view that each infantry division would eventually contain an armoured brigade. The scheme was dropped in September of the same year and the brigade was reorganised as an independent formation and renamed 6th Guards Tank Brigade.

The brigade was made up of 4th Battalion Grenadier Guards, 4th Battalion Coldstream Guards and 3rd Battalion Scots Guards. Unlike other armoured units, battalions of the Guards that had been converted to an armoured role maintained their infantry traditions by referring to squadrons by numbers and not letters. That is, No.1 Squadron contained Troops 1-5 while No.2 Squadron was made up of Troops 6-10 and Troops 11-15 were with No.3 Squadron. The exception to this was 3rd Scots Guards, which instead used the terms Right Flank Squadron, ‘S’ Squadron and Left Flank Squadron (1).

Churchill Mk IV tanks of 4th Grenadier Guards operating near St. Pierre-Tarentaine, a small town on the road from Vire to Villiers-Bocage, on 3 August 1944. In the original print of this photograph a name is just visible, although largely indecipherable, on the air intake of the nearest tank. It may be Finchley which is known to have been used, possibly by 5 Troop, from the account of Lieutentant Robert McCallum an officer of the battalion who served in France. The photograph on the following page was taken from the same series and shows Fulham, the third tank in line here, confirming that these vehicles are from the battalion's 1st Squadron.

**Notes**

1. Some accounts suggest that the Guards brigade was never officially attached to 15th Division, however, a number of photographs exist where the division's unit insignia is clearly marked on Churchills of the Grenadier Guards battalion during training in England in 1943.

Taken from the same series as the image reproduced on the previous page this photograph shows a Churchill Mk IV (75mm) of A Squadron, 4th Grenadier Guards. The tank's name, Fulham, is clearly visible on the hull air Intake and although the squadron sign has been covered in what appears to be mud the shape and Troop number are still evident. This tank is also shown and discussed on page 25 of the illustration section.

In early 1943 the brigade was equipped throughout with the Churchill tank. Despite its later successes these early vehicles had been hurriedly developed and rushed into production and the Guardsmen found a good many faults with their new tanks. In fact it was necessary to introduce over seventy design modifications before the brigade fired its first shot in anger. The return figures for June 1944, which probably represent the numbers submitted as being on hand when the Guards prepared to land in France, show that the brigade was equipped with 182 Churchill tanks including 18 Mk V and Mk VIII models armed with the 95mm close-support

gun. A full listing for each brigade for June and December 1944 is given on page 2.

An interesting account states that prior to the invasion the brigade's workshops had fitted most, if not all, the 6pdr-equipped tanks with the 75mm gun that was standard on the Churchill Mk VII which was just then coming into service, the resulting conversion being referred to as Churchill Mk IV (75mm). When the 21st Army Group commander, Lieutenant-General Montgomery, learned of this he ordered that the original armament be replaced immediately and despite appeals from the brigade commander, Brigadier Lloyd-Verney, to both HM King George VI and the Prime Minister, it seems that Montgomery prevailed as 164 conversion kits were reported as being on hand in June 1944, presumably just before the brigade left England (2). The suggestion that the time taken to reverse the 75mm conversions meant that 6th Guards Tank Brigade could not take part in the initial landings, as some accounts suggest, is difficult to believe. The D-Day invasion was meticulously planned months in advance with, in some instances, individual tanks being allocated specific objectives.

The brigade arrived in Normandy on Thursday, 20 July 1944 and ten days later was in action near Caumont l'Éventé, between Villiers-Bocage and St Lo, in support of the 15th (Scottish) Division. It was here that British armoured units first encountered the German Jagdpanther when three of these powerful tank destroyers managed to knock out eleven Churchills of 3rd Scots Guards in a fierce firefight that lasted less than two minutes.

Despite these losses the battalion held its position and was reinforced during the hours of darkness by which time the 4th Grenadier Guards, with fresh infantry support, had managed to push on to the south and take Montchauvet.

**Notes**

1. In some accounts the battalion titles incorporate the word ‘Tank’ for example 4th Tank Battalion Grenadier Guards although a number official wartime documents refer to 4th Grenadier Guards (Tank Battalion). While I feel that the former is probably correct I will allow the reader to choose.

2. Montgomery had little regard for the Churchill or the concept of an infantry tank, regarding the Sherman as a ‘universal tank’ capable of providing both infantry support and taking on the enemy’s armour. Gerald Lloyd-Verney, a descendant of Henry VII, had a personal connection to the Royal Family having served as a court official during the First World War.

A Churchill Mk IV of 4th Grenadier Guards, 6th Guards Tank Brigade photographed in Le Tourneur with infantry of The Royal Scots Fusiliers, passing a destroyed German PzKw IV tank. The

regiment's arm of service sign of a green square with a white bar indicating Army level troops and white 152 unit serial number is clearly visible on the lower hull. The light coloured circle on the right-hand side is a bridge classification marking. The brigade's formation badge, which was usually painted on the armoured plate next to the hull machine gun, appears to have been covered.

A Churchill Mk IV of 4th Grenadier Guards with infantrymen of The Royal Scots Fusiliers photographed on 3 August 1944 between Vire and Villers-Bocage. The brigade's formation badge is visible on the left rear hull and a red, 1st Squadron sign enclosing a white troop number, has been painted onto the rear of the blanket box. The turret is almost completely covered in lengths of spare track, a process that would extend to much of the hull as the campaign continued.

Churchill tanks and crews of 4th Grenadier Guards, 6th Guards Tank Brigade with troops of the 10th Battalion, Highland Light

Infantry from 15th (Scottish) Division photographed on 28 October just prior to the assault on Tilburg, east of Breda near the Dutch-Belgian border..

On Wednessday, 2 August 1944 the brigade commander, Brigadier Lloyd-Verney, left to take command of 7th Armoured Division which had so far, in Montgomery's eyes at least, failed to live up to its illustrious reputation. In early August the brigade took part in the attacks on Estry, north-east of Vire, in support of the infantry regiments of 15th Division with a number of Churchill Crocodile and AVRE tanks from 79th Armoured Division. Several fierce actions took place here including a duel between a German Tiger and a Churchill of No.2 Squadron from the Grenadier Guards commanded by Lieutenant Lord Charles Oliver Fitzroy which only ended when the 21-year-old Fitzroy was killed by a sniper as his tank backed away. The village was eventually occupied on 12 August when the German defenders simply withdrew, almost a full week after the initial assault.

Also at this time elements of the brigade supported the Guards Armoured Division in Operation Grouse, an attempt to capture the high ground between Tinchebray and Condé-sur-Noireau around Mont de Cerisy, approximately 20 kilometres south-east of Vire. The Coldstream Guards, with the support of the Shermans of 2nd Battalion Irish Guards, quickly reached the village of Chênedollé which they found to their surprise to be unoccupied. Elsewhere, however, progress was slow and although the Vire-Vassy road was secured by the end of the first day British units were ordered to halt and consolidate their positions.

On 16 August 1944, the very day the Canadians took Falaise further narrowing the gap through which the Germans could retreat, the acting brigade commander, Sir Walter De Stopham Barttelot, was killed. His place was taken by Brigadier Walter D. C. Greenacre who commanded the brigade until the end of the war (1).

The brigade took part in the battles in Holland in September and October 1944, notably at Overloon were the Coldstream Guards acquired a German Panther in running order which after some repainting remained with the battalion. Christened Cuckoo by its new owners, the tank served with the battalion headquarters during the assault on Geijsteren castle, north of Venlo, in November 1944 and in the capture of Waldenrath in January 1945 during Operation Blackcock. The Guards were particularly impressed with the accuracy of the Panther's 75mm gun and its ability to negotiate the ice-covered roads which many of the battalion's Churchills found impassable. During the battles in the Reichswald in early 1945 the Panther's fuel pump was irreparably damaged and lacking any spare parts, Cukcoo had to be abandoned. Of this period Brigadier Greenacre wrote to his wife: 'Our battle goes slowly, we are meeting many mines and they take time to clear. The weather has been foul and so wet that most of the ground is too soft for tanks.' These conditions would continue for some time.

**Notes**

1. Although referred to as a Brigadier in many accounts Barttelot had in fact been promoted from Major to temporary Lieutenant-Colonel and acting Brigadier to take the place of Lloyd-Verney when he left the brigade.

After the fighting for Overloon the brigade was involved in the capture of Venraij and Meijel, less than 20 kilometres from Venlo and the German frontier. The Scots Guards lost twenty-three tanks here to mines and the other battalions experienced similar losses. Although the battles in this area continued for some time the brigade was withdrawn from the frontline, moving to Helmond, west of Eindhoven, to rest and refit. On 2 February 1945 the brigade was formally renamed 6th Guards Armoured Brigade and

classified as a Type B brigade which signified an independent formation without an attached infantry battalion. This was essentially a change in name only.

On 8 February 1945 the brigade took part in Operation Veritable, often referred to as the Battle of the Reichswald, a major offensive designed to breach the German defences along the Siegfried Line and trap the enemy units situated between the Maas and Rhine rivers. Once again supporting 15th (Scottish) Division the brigade's tanks were to advance from Nijmegen and take the town of Kleve, an important road junction on the Rhine through which any German reserves would have to pass. Setting off in driving rain the Churchills of 4th Coldstream Guards, with the infantry of 46th Brigade carried in Kangaroo personnel carriers, managed an advance of 10 kilometres to the outskirts of Frasselt where they were held up by an extensive minefield. Reluctant to wait for the specialised Sherman Crab tanks which could have cleared a path for the infantry, Lieutenant Geoffrey Anson left the safely of his tank to organise mine-clearing parties allowing the 9th Cameronians (Scottish Rifles) to secure the town. In recognition of the bravery and leadership which he displayed throughout these last weeks of the war Lieutenant Anson was awarded the Military Cross.

The Germans had deliberately flooded the area around Kleve, turning the few roads into muddy tracks. In addition the enemy had littered the area with steel and concrete roadblocks and every farmhouse had been turned into a strongpoint. In spite of this the British units fought their way through with the Coldstream Guards at one time dismounting to fill the flooded roads with timber and rubble and on 11 February 1945 the brigade's tanks entered Kleve, the first major town in Germany to fall to the British (1).

On 14 February the Churchills of No.3 Squadron, 4th Coldstream Guards, supporting a battalion of the Glasgow Highlanders, attempted to take Moyland on the Kleve-Xanten road but ran head-

on into the tanks of 15. Panzergrenadier-Division which had been hurriedly moved into the area the previous day and could make little headway. A further assault organised on the following day also met with failure. On Sunday, 18 February 1945 the brigade, again supporting 15th Division, took part in the assault on Goch, south of Kleve, and by the following Tuesday had passed their objective, smashing through Buchholt to the east and taking prisoner 150 of the German Fallschirmjäger that were defending the town. By 23 February, however, the Germans were counter-attacking and in the ensuing melee the tanks of No. 3 Squadron, Coldstream Guards managed to advance to the Goch-Wesel railway line. It was at this time that Cuckoo, the captured Panther, was abandoned.

A churchill Mk IV 75mm Tank Brigade photographed on 2 November 1944 somewhere in Holland. The burning carrier is from 6th Battalion, King's Own Scottish Borderers of 15th(Scottish) Division identified by the unit serial number 57 and the division's formation badge. The black band of colour on the tank's air intake would suggest that this vehicle is from 4th Coldstream Guard but there are no other discernible markings and the gunner's cap badge is to small to identify.

**Notes**

1. The towns of Kleve and Goch are situated on the left bank of the Rhine just a few kilometres inside German territory. Today they are separated by a thin band of forested land but in 1944 they were linked by a series of trench lines and bunkers built amongst the trees which at that time covered most of the open land.

A Churchill Mk IV (75mm) tank of 4th Grenadier Guards, followed by a Churchill VII, photographed on 17 October 1944 near Venraij in Holland. Just visible on the turret roof is the regulation aerial recognition marking of a white star and circle, partly covering the dome of the extractor fan. Note the extensive use of spare track links, both Churchill and Sherman, as extra protective armour.

By the end of February the Grenadier Guards and Scots Guards were supporting 3rd British Infantry Division, which had replaced the exhausted 15th (Scottish) Division, in a general advance from Goch towards the woods along the Udem-Weeze road. In close quarter fighting against elements of 7. Fallschirmjäger-Division the British units secured the road allowing the Coldstream Guards to advance

to Kervenheim on the brigade's right flank by 28 February and although they were initially held back by the German paratroopers, the town eventually fell on 2 March 1945. On the same day the Scots Guards captured Winnekendonk further to the south and this allowed the Coldstream Guards to attack Kappellen, which fell almost without a fight, further widening the gap in the German lines south of the Hochwald.

For the next few weeks the brigade was stationed in the area around Winnekendonk refitting after almost a month of continuous combat, their place in the line taken by the tanks of 2nd Irish Guards. On 23 March 1945 the British launched Operation Varsity, the airborne phase of the crossing of the Rhine, with units of British 6th Airborne Division and US 17th Airborne Division landing north of Wesel on the east bank of the river. The ground phase, Operation Plunder, saw assault troops ferried across the river by LVT Buffaloes supported by Sherman Duplex Drive tanks. The 6th Guards Armoured Brigade was to link up with the American airborne troops and on 27 March received the order to advance and take Münster, almost 80 kilometres to the north-east. With the US paratroopers on board, the Churchills set of with the Coldstream Guards in the lead and were held up only briefly near Lippramsdorf by a number of 88mm anti-tank guns and reached Haltern am See just 30 kilometres short of their objective by 9.00pm that evening. From here German resistance, previously nullified by the bombing that had preceded Operation Varsity, began to stiffen and over the next four days the Churchills had only advanced to the crossroads town of Appelhülsen, some 15 kilometres outside Münster. However, an advance by the Scots Guards on the brigade's northern flank allowed the Coldstream Guards to take Albachten, today an outer suburb of Münster, and by 2 April 1945 the city had been secured.

On 6 April the brigade resumed the advance, with 3rd Scots Guards capturing Celle, north-east of Hannover, which they found to be largely undamaged. During the late afternoon of the same day the Coldstream Guards, with infantry from 15th (Scottish) Division

reached Ramlingen but were held up here by an ad-hoc German battle group composed of Hitler Youth boys who managed to disable a number of tanks (1).

**Notes**

1. At least one account suggests, rather vaguely, that the German defenders were officer cadets, however. Lieutenant Ronald Buckland who served with the 4th Coldstream Guards as the battalion Intelligence officer and took part in this action states quite clearly in his account that the tanks were destroyed by members of the Hitler Youth.

The advance continued with the three battalions meeting fanatical, although often ineffectual, resistance and by the evening of 14 April 1945 had reached Stadensen near Uelzen, south of Lüneburg.

At 2.00am on the following morning tanks and halftracks from Panzer-Division Clausewitz crashed into the position established by the Coldstream Guards and 2nd Glasgow Highlanders and a fierce firefight ensued with tanks and 25pdr guns firing at each other at almost point blank range, the battle illuminated by burning tanks and trucks. The Germans withdrew at around 6.00am only after Stadensen was cleared house by house. Casualties among the British tank crews were extremely light but the Highlanders lost forty men killed and another sixty missing in addition to all their transport (1).

Preceded by waves of Typhoon fighter-bombers and intense artillery fire, the Guardsmen took Uelzen late on Tuesday, 17 April 1945 and on the following Friday tanks of the battalion reached the Elbe

river. The brigade crossed the river on 30 April, following an assault made on the previous day by 15th Division's infantry, only to drive into a German artillery barrage which inflicted a number of casualties. On 2 May the British units were preparing for an assault on Hamburg when emissaries of the German high command approached the Allied lines asking for a meeting with Field Marshal Montgomery with a view to arranging an immediate cease fire and subsequent surrender. On 6 May 1945, 4th Coldstream Guards entered Kiel and accepted the surrender of the city from Oberst Hubner, the commander of Fallschirmjäger-Regiment 24 who exclaimed that his men were proud to surrender to such worthy opponents (2).

All the brigade's tanks, including the Stuarts of the reconnaissance troop, were named and those of the Coldstream Guards are shown in detail in the diagram on the following page. The names employed by the other battalions are listed in the diagram on page 11.

A Churchill tank, probably a re-worked Mk IV of 4th Coldstream Guards, photographed on 29 March 1945 carrying paratroopers from the US Army's 17th Airborne Division through Dorsten, some 30 kilometres south-west of Munster, in western Germany. The Guards formation badge is clearly visible on the hull rear and the name Eagle, painted onto the air intake, identifies this vehicle as the tank of the battalion commander, Lieutenant-Colonel Dunbar.

**Notes**

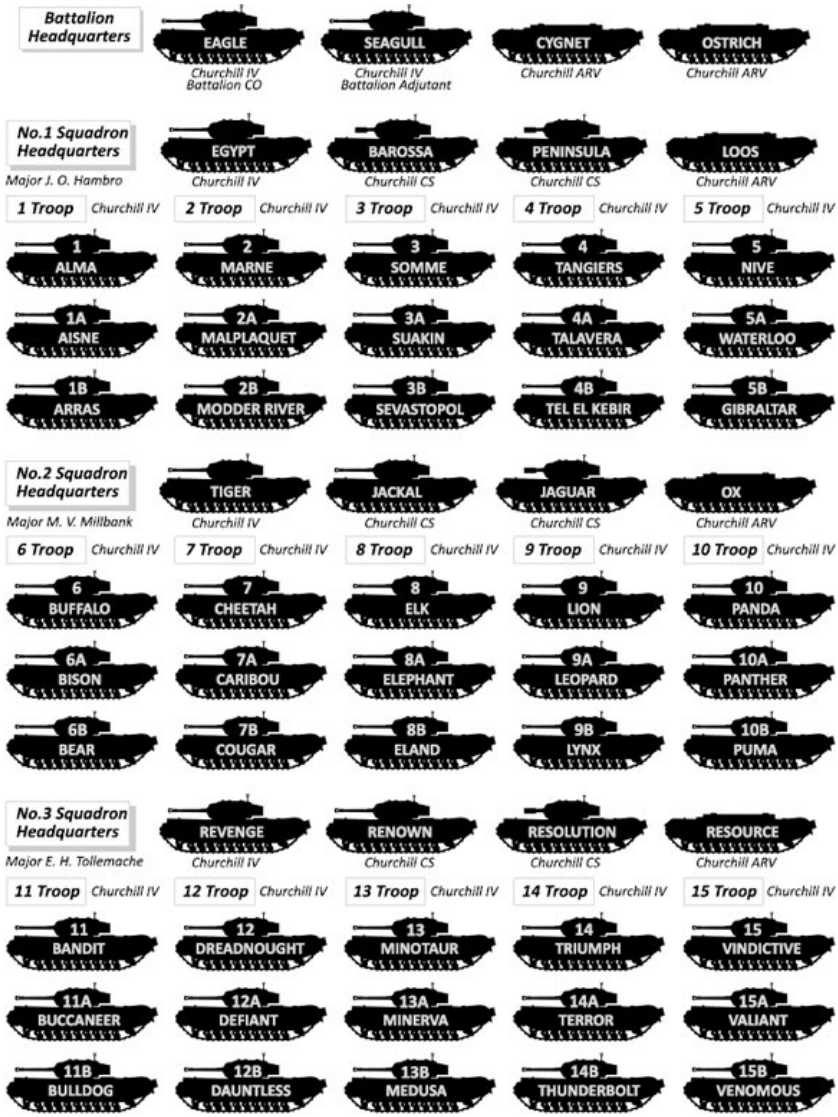
1.Panzer-Division Clausewitz was the last armoured division raised by Germany during the war. It was scraped together from the survivors of other Panzer battalions and the personnel of various training schools and the loss here of 50 men killed with a further

150 taken prisoner in addition to the destruction of a number of the German division's irreplaceable armoured vehicles would have been severe.

2.The battalion famously claimed to have captured a U-Boat in addition to taking control of the city.

## *4TH BATTALION, COLDSTREAM GUARDS. 6 JUNE 1944*

*When the battalion arrived in France in July 1944 the commanding officer was (acting) Lieutenant-Colonel Sir William de Stopham Barttelot, 4th Baronet Barttelot. His second-in-command was Major Archibald William Smith who succeeded to the command of the battalion in August when Bartellot replaced Brigadier Greenacre as brigade commander. The battalion adjutant was Captain Brian Ball-Greene. The battalion headquarters also contained a reconnaissance troop of eight M5 and M5A1 light tanks, referred to by the British as Stuart V and VI respectively. They were named Snipe, Peregrine, Hawk, Kite, Falcon, Osprey, Flycatcher and Merlin. Note that this number is four short of the authorised allocation.*




## *31ST TANK BRIGADE*

Photographed on 28 June 1944, just before the start of Operation Epsom, the commanding officer of 7th Royal Tank Regiment Lieutenant George Gaisford, in black RAC beret sitting on the turret's forward edge, confers with men of his unit and officers of 15th (Scottish) Division. Many Churchill Mk IV tanks of this battalion were reworked to Mk IX LT standard and this vehicle has the applique armour welded to the front of the turret which was a part of the upgrade process. Note that the QF 6pdr gun is retained. These conversions are explained in the technical section on page 61. Note the squadron sign on the turret identifying the headquarters of 31st Tank Brigade's senior regiment.

First formed in January 1941 this brigade initially comprised 9th Battalion and 10th Battalion, Royal Tank Regiment with 141st Regiment RAC added in November of the same year. The latter was raised by converting 7th Battalion, The Buffs (Royal East Kent Regiment) and it is interesting to note that this was the first of the Royal Armoured Corps regiments to be equipped with the Churchill tank. In addition the battalion retained, in part, its original title and

was referred to as 141st Regiment RAC (The Buffs). At the insistence of the officers and men the Buffs cap badge was retained, albeit in silver in place of the traditional brass in recognition of the battalion's attachment to the Royal Armoured Corps. In April 1943, 10th Royal Tank Regiment was renamed 7th Royal Tank Regiment after that battalion had been almost completely destroyed in the previous year at Gazala in North Africa.

In May 1942 the brigade was attached to 53rd (Welsh) Infantry Division to trial the concept of a mixed formation of tanks and infantry which was eventually abandoned as being unsuited to the terrain and conditions the army was expecting to face in France and northern Europe. In September 1943 the brigade reverted to its independent status and began training in earnest for operations in France.

The two senior regiments did not arrive in Normandy until 21 June 1944 although a single troop of C Squadron, 141st RAC took part in the assault on D-Day equipped with Crocodile flamethrower tanks based on the Churchill MK VII (1).

On the very day that 7th and 9th Royal Tank Regiments arrived in Normandy, 141st RAC left the brigade and was attached to 79th Armoured Division. The brigade's remaining two regiments went into action for the first time on 26 June taking part in Operation Epsom, supporting 15th (Scottish) Division in the push inland from the Normandy beachhead towards the city of Caen. On the left flank of the British attack A and B Squadrons of 9th Royal Tank Regiment were to attack St. Manvieu and La Gaule while C Squadron, with an infantry battalion in support, were to capture Montrainville and, if the opportunity presented itself, secure a bridgehead over the Orne river. On the right, 7th Royal Tank Regiment were to advance past the Tilley-Caen road and capture the high ground near Haut du Bosq. From the very first the German defence was ferocious, particularly in the cornfields around Cheux where the tanks were

surprised by a scratch force of 88mm anti-aircraft guns and Panther tanks firing from a position which the British tankers had thought secured. To make matters worse the heavy rain, which had fallen throughout the day, continued into the night. Late on the following day a battalion of the Argyle and Sutherland Highlanders was able to capture a bridge across the Odon and establish a bridgehead which became known as the Scottish Corridor.

**Notes**

1. Many accounts suggest that significant numbers of Crocodile flamethrowers came ashore on D-Day, however, just three tanks landed on 6 June 1944 in support of 69th Infantry Brigade of 50th Infantry Division on Gold Beach and there is some evidence that they were not committed to the battle on that day although at least one was stranded on the beach, its tracks thrown due to the rough shingle.

By 29 June elements of 11th Armoured Division had crossed the Odon bridge and were on the summit of Hill 112, while the Germans still held the reverse slope. Although the British units here managed to fight off a series of determined counter-attacks made by elements of 12.SS-Panzer-Division it was decided to abandon the hill that night (1).

During this time C Squadron of 9th Royal Tank Regiment was holding off a German counterattack made by the tanks of 9.SS-Panzer-Division on their positions around Haut du Bosq which the regiment had captured earlier. By 1 July, when the offensive was called off, 7th Royal Tank Regiment were in positions south of Cheux and 9th Royal Tank Regiment were attached to 43rd (Wessex) Division in anticipation of a German counter-attack which never materialised.

The battles here could be considered to have ended in something of a draw for although an advance across the Orne River and the capture of the high ground south of Caen had not been achieved the Germans had been forced to commit their armoured reserves to meet local threats as they developed, losing over 120 tanks which could not be easily replaced.

From 10 July 1944, 31st Tank Brigade took part in Operation Jupiter in support of 43rd (Wessex) Division. For this assault they were rejoined by the Crocodiles of 141st RAC which, it will be remembered, had left the brigade in late June. It was planned that the division would occupy the villages of Baron-sur-Odon and Fontaine-Étoupefour and the Chateau de Fontaine, which roughly form a line running from Villiers-Bocage to Caen, and to recapture Hill 112 which had been given up so easily just weeks before. It was hoped that the initial objectives could be captured by 9:00am on the first day and the gap created in the German lines would be exploited by the Sherman tanks of 4th Armoured Brigade which would advance and establish a bridgehead on the west bank of the Orne.

The attack began at 5.00am and within two hours B Squadron, 9th Royal Tank Regiment had secured the Chateau de Fontaine and C Squadron were at Éterville on the outskirts of Caen. By 8.30am, however, German resistance began to harden with the regiment's A Squadron reporting that its tanks were coming under fire from a number of self-propelled anti-tank guns. No sooner had artillery fire been directed at the enemy vehicles than two Churchills were hit by anti-tank rounds fired from a completely different direction. Unknowingly the British had bypassed a number of German positions from which the defenders were now emerging. At around 9.30am the tanks of 7th Royal Tank Regiment, which were near Maltot on the south-western outskirts of Caen, were hit by a strong counter-attack which managed to inflict a number of casualties including both the commanding officer, who refused to leave the

field, and his second-in-command. A number of Tiger tanks had worked their way in to Maltot and onto the north-east slopes of Hill 112 from which they were able to direct their fire onto the British infantry and tanks. By midday A Squadron had been reduced to four serviceable tanks and had lost its commander, Major Ballantine, who subsequently died of his wounds. The Germans did not have everything their way however and a single Churchill of C Squadron, 7th RTR, commanded by Corporal Sheldon, destroyed three German Tigers although the British tank was itself hit many times. On the following day a strong counter-attack made by parts of 10.SS-Panzer-Division supported by a number of Tiger tanks forced the British troops that had reached the summit of Hill 112 back onto the northern slopes. Although the offensive had effectively come to an end, the brigade spent the rest of July in this area involved in several skirmishes and an attempt to retake the village of Maltot.

A Churchill Mk IV (75mm) of 7th Royal Tank Regiment, photographed in Normandy in late June 1944 during Operation Epsom. The ammunition cases and boxes welded to the turret, providing, extra stowage, were an identifying feature of this brigade, particularly the two senior regiments. The supporting infantry are from 8th Battalion Royal Scots of 15th (Scottish)

Division.

**Notes**

1. This hill is the only significant high ground in the Normandy countryside and the Germans considered its possession to be the key to Caen and, by extension, Normandy. The British would pay a high price for their failure to hold it in late June.

Taken from the same series as the tank shown below this Churchill Mk IV 75mm of 7th Royal Tank Regiment covers a Jeep and two Loyd Carriers towing 6pdr anti-tank guns of 7th Battalion Seaforth Highlanders, 15th (Scottish) Infantry Division. Both front fenders carry what at first appear to be painted figures, but are in fact be some kind of relief sculpture, evident by the shadows which are consistent on all. The righthand side has an image of a young woman, possibly wearing a crown, with the name Monica in

elaborate script just next to her right shoulder. The left front fender has a dancing figure about 9 inches in height close to the inside edge.

A Churchill Mk IV (75mm) of 7th Royal Tank Regiment, 31st Tank Brigade, photographed on 26 June 1944 during Operation Epsom. The regiment's unit serial number is clearly visible on the lower hull front. This vehicle is shown and discussed further in the illustration section.

Although no identifying markings are visible on these tanks the official caption states they are from 31st Tank Brigade photographed on 31 July 1944 and as the cap badges worn by the men are those of the Royal Tank Regiment this iseither 7th or 9th Battalion. In the centre-left of the photograph are two Churchill MkV Close Support vehicles armed with the 95mm howitzer, two of which were attached to each squadron. Behind these are two Churchill Mk VII tanks, identified by the distinctive turret shape and gun aperture, and given the date must have been very recent arrivals. The extensive camouflage appears to be held in place by fencing wire.

At the end of July the brigade took part in Operation Bluecoat which was intended to take advantage of the success of the US Army's Cobra offensive that was rapidly pushing the German defenders further eastwards. The brigade's mission was to secure the important road junction of Vire, directly between Falaise and Villedieu-les-Poêles, and the high ground of Mont Pinçon which lies to the northeast of Vire. The enemy resistance met here was noticeably less effective with German units often retreating under

the pressure of concentrated artillery fire long before the tanks had reached them. Indeed, the War Diary of 9th Royal Tank Regiment noted that: '.... being able to measure an advance in miles a day without suffering heavy casualties had proved a great tonic for everyone after the grimness of the battles of Cheux and Maltot, where movement was restricted to a couple of thousand yards.'

From 8 August, under the command of First Canadian Army, the brigade supported the infantrymen of 49th (West Riding) Division in Operation Totalise, an assault to close the ring on the German units now withdrawing towards the east. By the end of August 1944, 141st RAC had returned to 79th Armoured Division and the remains of 9th Royal Tank Regiment, which had spent much of the month with First Canadian Army, was transferred to 34th Tank Brigade (1).

From the first hours of the Normandy campaign the Churchill Crocodile had proven to be such a successful weapon system that is was decided to eventually equip the entire brigade with these flamethrower tanks.

On 17 August 1944, 7th Royal Tank Regiment was detached and placed directly under the command of I British Corps for the attack on the port city of Le Havre at the mouth of the Seine, codenamed Operation Astonia. The regiment was replaced briefly by 144th Regiment RAC, a Sherman-equipped unit which had been attached to 33rd Armoured Brigade. By the end of the month the headquarters and the support elements of 31st Tank Brigade had been transferred to 79th Armoured Division and 144th RAC had returned to 33rd Armoured Brigade (1).

**Notes**

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1. Interestingly, the War Diary of 9th Royal Tank Regiment makes no clear mention at all of the regiment departing or its subsequent attachment to 34th Tank Brigade at that time. Indeed, it is not until 27 October that an entry mentions orders received from the headquarters of 34th Brigade, by which time the regiment was fighting to capture the villages outside Roosendaal in Holland.

During September 1944 the Crocodiles of 141st RAC supported the US 29th Infantry Division in the attempt to take the heavily fortified port of Brest in north-western France. The flame throwing tanks of B Squadron proved particularly useful in the capture of Fort Montbarey which was protected by three lines of defensive works including an extensive minefield, machine-gun nests, anti-aircraft and anti-tank positions and even a steep moat.

Shortly after this 141st RAC returned and 31st Tank Brigade was brought up to full strength by the addition in October of 1st Fife and Forfar Yeomanry equipped with Crocodile flamethrower tanks and in early November by 11th Royal Tank Regiment operating Buffalo LVT amphibious tractors. At this time the Crocodile squadrons were reorganised and now contained three troops with four tanks each and a fourth troop with three vehicles. This was in fact merely the formalisation of the practice of allocating half troops of these tanks as required and was made possible by the arrival of the new tanks of the Yeomanry regiment. On 22 December 1944, 11th Royal Tank Regiment was replaced by the 49th Armoured Personnel Carrier Regiment and the 1st Canadian Armoured Personnel Carrier Regiment (2).

On 2 February, in line with an army-wide reorganisation, the brigade was renamed as 31st Armoured Brigade and less than two weeks after this 7th Royal Tank Regiment, now fully trained and equipped with Churchill Crocodile tanks, returned (3). From mid-

April 1945 the brigade was reinforced with 4th Royal Tank Regiment equipped with LVT Buffaloes and for almost two weeks by the Sherman Duplex Drive tanks of the Staffordshire Yeomanry.

It was never intended that 79th Armoured Division should fight as a single unit and the allocation of 31st Armoured Brigade's assets, during the closing phases of Operation Plunder, the crossing of the Rhine in late March 1945, provides a good example of how the regiments and battalions of the division were employed (4). The brigade headquarters and C Squadron, 7th Royal Tank Regiment were directly attached to XII British Corps. The Crocodiles of the regiment's A Squadron were with 15th (Scottish) Division while B Squadron supported 53rd (Welsh) Division. The regimental headquarters and B Squadron, 141st RAC were allocated to 43rd (Wessex) Division while A Squadron was with 3rd British Division and C Squadron with 51st (Highland) Division. The Fife and Forfar Yeomanry's regimental headquarters and the tanks of C Squadron were with II Canadian Corps and the tanks of B Squadron were attached to US 79th Infantry Division. The Crocodiles of the regiment's A Squadron supported I Canadian Corps which had only recently been transferred from Italy.

Photographed just prior to the assault on Le Havre on 10 September 1944 these Churchill Mk VII tanks are from 34th Tank Brigade. The lanyard worn on the left shoulder of the soldier third from right identifies this unit as 9th Royal Tank Regiment, which joined the brigade on 4 September 1944. The personnel of this battalion, following a tradition which dated back to the 1914-18 War, were granted the privilege of wearing a lanyard in the red and green colours of the French Croix de Guerre on their left shoulder. He has, however, retained the Diabolo formation badge of 31st Tank Brigade, to which the battalion had been attached until late August 1944.

**Notes**

1. A history of 79th Armoured Division, privately published in June 1945, states that the headquarters of 31st Tank Brigade with 1st Fife and Forfar Yeomanry were attached to the division in September 1944 followed by 7th Royal Tank Regiment in January 1945. The Crocodiles of 141st RAC had of course been with the division since July 1944.

2. Both equipped with the fully-tracked Kangaroo armoured personnel carrier.

3. The original 4th Royal Tank Regiment had surrendered with the Tobruk garrison in June 1942 and was reformed in March 1945 from 144th RAC which, it will be remembered, served with 31st Tank Brigade in August 1944.

4. This large-scale offensive incorporated three smaller assaults codenamed Turnscrew, Widgeon and Torchlight. The airborne

phase was referred to as Operation Varsity

*A Churchill Mk VII Crocodile photographed in late August 1944, demonstrating the tank's flamethrowing capabilities. This vehicle is from 141st Regiment RAC, identified by the commander's cap badge, an example of which can be seen on page 30. This tank is also show in the photograph on page 57 where the WD number T 252034/H is clearly visible. The marking next to the driver's port, where the formation badge is often displayed, is interesting as the regiment was still attached to 31st Tank Brigade at this time. The badly worn notation on the lefthand side of the lower hull reads: 'This vehicle is filled with anti-freeze 1/3-2/S and should not be drained'. All the letters are upper case.*

On 15 April 1945 the tanks of 7 Royal Tank Regiment took part in the capture of Brinkum, south-east of Emden, and within ten days had advanced more than 80 kilometres to the outskirts of Bremen. On 26 April Crocodiles of C Squadron supported by infantry of 5th Highland Light Infantry and 5th King's Own Scottish Borderers cleared the last of the German resistance from the port city's eastern docks. During the evening of 28 April 1945 elements of 15th (Scottish) Division and a Commando brigade were ferried across the Elbe near Bleckede by the Buffaloes of 4th Royal Tank Regiment supported by a number of Sherman Duplex-Drive tanks. Other units of 79th Armoured Division advanced on Hamburg and Bremerhaven to the north and east with the Crocodiles of both 7th Royal Tank Regiment and 1st Fife and Forfar Yeomanry taking part while C Squadron, 141st RAC supported 2nd Canadian Division in the capture of Oldenburg.

The city of Hamburg fell on 2 May 1945 and the following day a delegation representing the German high command approached the British lines to asked for an armistice. Elements of the brigade remained in Germany until the end of August 1945, more than three months after the end of hostilities.

## *34TH TANK BRIGADE*

The brigade was formed in December 1941 as one of the independent Army Tank Brigades which were then being raised and equipped with the Churchill tank.

In June 1942 the 34th Army Tank Brigade was attached to 1st British Infantry Division as part of the mixed formation experiment and later transferred to 43rd (Wessex) Division.

By the following September the brigade was returned to

independent status under the control of XII Corps. At that time the brigade contained 147th Regiment RAC, 151st Regiment RAC and 153rd Regiment RAC. The regiments had been raised by converting 10th Battalion, The Hampshire Regiment, 10th Battalion, King's Own Royal Regiment (Lancaster) and 8th Battalion, The Essex Regiment respectively.

In December 1943, 151st Regiment was renamed as 107th Regiment RAC. Curiously, it seems that the normal order of precedence was not followed within this brigade with 107th RAC being relegated to the position of second senior regiment and 147th RAC taking the senior place and there is ample photographic evidence to support this. When 9th Royal Tank Regiment joined the brigade, it assumed the position of junior regiment previously held by 153rd RAC. This state of affairs was allowed to continue until early February 1945 when the brigade was renamed 34th Armoured Brigade and the correct order precedence was established.

Equipped with a mixture of Churchill Mk III, IV, VI and VII tanks, elements of the brigade landed in Normandy on 16 June 1944.

The brigade first saw action on 15 July when the Churchills supported the infantry of 15th (Scottish) Division during Operation Greenline, the attack across the Odon river towards Hill 112 south-west of Caen. The attack went well with the brigade's objectives taken by late morning but a number of German positions had been bypassed and the fire from these, combined with a strong counter-attack just before 3.00pm, began to take a heavy toll on the brigade's tanks particularly those of 153rd RAC. During the afternoon the regiment withdrew to a prearranged rallying position and was immediately hit by a heavy mortar barrage which managed to inflict more casualties than had the German tanks.

In the following days the Churchills of 147th RAC and 153rd RAC supported elements of 43rd (Welsh) Division in operations near Bougy were the British tanks fought off a German counter-attack on Monday, 17 July in a savage tank-to-tank battle which lasted into the night. After a few days rest the brigade was placed in defensive positions around Bougy and Maltot, on the south-western edge of Caen, in expectation of a German attack which never came. In early August the brigade took part in the assault on Mont Pinçon in support of 59th (Staffordshire) Division crossing the Orne river and following the now retreating Germans with their accompanying infantry carried on the brigade's tanks.

*An early Churchill Mk VII of B Squadron, 107th Regiment RAC photographed in Normandy on 17 July 1944. The squadron sign, enclosing the number identifying 2 Troop, is marked on the turret front and also on protective cover of the 75mm gun's muzzle brake. Infantry battalion's converted to an armoured role had the option of wearing the RAC cap badge or retaining their own and an example of the badge of the King's Own Royal Regiment (Lancaster), from which this unit was raised, is shown here.*

*Both images on this page are taken from a lengthy series which depicts the same tank of B Squadron, 107th Regiment RAC. This is an early production Churchill Mk VII without the prominent bulge on either side of the main gun aperture which characterised later models. The very finely woven mesh on the turret obscures the remains of a B Squadron sign, part of which can still be seen under the rolled tarpaulin.*

*The full set of insignia worn by the hull machine gunner in the photograph above is interesting and includes the 2nd Army formation badge and an elaborate regimental flash based on the cap badge. I believe that the colourful formation badge often attributed to 34th Tank Brigade and shown on page 26 was not used until much later, possibly as late as February 1945 when the brigade was renamed. This tank was commanded by Lieutenant John Fothergill, seen here standing in the commander's cupola, and paid for, at least in part, by donations raised in Fothergill's home town. The tank was named Briton and a side view is shown in the illustration section on page 18. Sadly, Lieutenant Fothergill was killed on 16 August 1944 in the fighting along the Orne river and as a Churchill Mk VII Crocodile with the same name but different WD*

*number appears later with this regiment it is fairly safe to assume that the tank shown here was destroyed or written-off. The photograph at left provides a rear view of It. Fothergill's Churchill VII as it follows other tanks of B Squadron. Each tank carried the light coloured square plate with a dark, probably black, number attached to the rear of the blanket box as seen here. The number probably identifies the individual vehicle as none seem to be repeated. The Second Army formation badge and the regiment's arm of service sign and unit serial number are painted onto the rear hull and have been deliberately covered with a coat of mud. The unusual order of precedence used by this brigade is explained in the text.*

*A Churchill Mk VII of B Squadron, 9th Royal Tank Regiment, which was attached to 34th Tank Brigade from 4 September 1944, photographed in Holland in 1945. Below: Photographed at the start of Operation Veritable on 8 February 1945 near Groesbeek, southeast of Nijmegen on the Dutch-German frontier, these Churchill tanks are from 34th Armoured Brigade, probably C Squadron of 9th Royal Tank Regiment. The building in the background, a restaurant known as The Old Mill in 1945, is still standing today. At far left is the cap badge of the Hampshire Regiment from which 147th RAC was raised. Regular infantry battalions converted to RAC regiments had the option of*

*retaining their original distinctions.*

On 17 August 1944 the decision was made to disband 153rd RAC with the tanks and personnel of C Squadron transferred complete to 107th RAC and the remainder filling vacancies within the brigade (1).

On 4 September the regiment's place was taken by 9th Royal Tank Regiment which had been transferred from 31st Tank Brigade. On the same day the brigade crossed the Seine and joined 49th (West Riding) Division in preparation for Operation Astonia, the assault on Le Havre. The attack began on 10 September with the tanks of 107th RAC firing from hull-down positions directly into the German defensive works and the city was secured within two days. On the last day a Churchill troop of 7th Royal Tank Regiment, which had been temporarily attached to the brigade, entered the city without infantry support and captured the garrison commander and his entire staff.

Following the capture of Le Havre the brigade spent the remainder of August and almost all September in the area between Dieppe and Rouen due to a shortage of spare parts and fuel. In addition to the general lack of supplies the tanks were badly in need of repair and the crews were exhausted, many having been in combat for months. On 29 September 1944 the brigade's Churchills, including the delivery squadron, moved on their own tracks to Desvres, outside Boulogne.

By 6 October the brigade had returned to the front near Eindhoven in Holland and was immediately deployed taking part in the fighting to enlarge the Nijmegen Salient in support of 51st (Highland) Division and 49th (West Riding) Division. The tanks of 107th RAC became part of Clarkeforce, a highly mobile formation

under the 34th Tank Brigade's commander Brigadier W. S. Clarke which in addition to the Churchill gun tanks included a troop of Crocodiles from 1st Fife and Forfar Yeomanry and the Achilles self-propelled anti-tank guns of 62nd Anti-Tank Regiment, Royal Artillery (2).

It was planned that the Churchills of 9th Royal Tank Regiment, supported by the infantry of 49th (West Riding) Division, would open a gap in the German defences through which the armoured vehicles of Clarkeforce would pass, exploiting the breakthrough to advance and secure the road to Wuustwezel, on the Dutch frontier north-east of Antwerp. The operation was codenamed Rebound and the subsequent advance, referred to as Operation Thruster, led to the capture of Roosendaal, which 9th Royal Tank Regiment entered on 29 October, and the clearing of the banks of the Scheldt in Holland. In October the brigade relinquished control of 7th Royal Tank Regiment which took part in the siege of Dunkirk forming part of the western perimeter reinforced by a single squadron of 147th RAC, which was recalled after only four days, and later by a squadron sent out from England that remained with 7th Royal Tank Regiment until February 1945(1).

**Notes**

1. A history of the brigade prepared in 1945 from the War Diary states that a composite squadron was scrapped together from the regiment as a whole and transferred complete to 107th RAC under the command of Major E. C. Garner. The history is also quite emphatic that some men were allocated to 7th Royal Tank Regiment which was temporarily attached to the brigade at the time.

2. Although it is doubtful that these 17pdr-armed vehicles were

referred to as Achilles during the war I have used the term here as a matter of convenience. This ad-hoc force was actually the creation of Major-General Evelyn Hugh Barker the commanding officer of 49th (West Riding) Division and obviously inspired by the German Kampfgruppen.

From 19 December 1944, in an effort to reinforce the US Army units facing the German offensive in the Ardennes, the brigade was attached to 43rd (Wessex) Division which was ordered to attack along the north bank of the Meuse river and hold the bridges between Namur and Liege. By Christmas Day the brigade was operating under the command of Guards Armoured Division and on 30 December was supporting 6th Airborne Division east of the Meuse. During this time 9th Royal Tank Regiment was detached from the brigade and came under the command of 51st (Highland) Division operating around Liège.

On 8 February 1945 the brigade took part in Operation Veritable, where the tanks of the brigade were tasked with clearing a large stretch of the Reichswald, a heavily forested area over 10 kilometres wide and 5 kilometres deep, on the Dutch-German border. During six days of heavy fighting the Churchills of 9th Royal Tank Regiment and 147th RAC were reduced to the strength of less than two squadrons with many tanks so badly bogged in the muddy forest tracks that they could not be recovered for several weeks. At the same time the tanks of 107th RAC supported 51st (Highland) Division advancing as far as Goch, south of Kleve. From 17 February 1945, 9th Royal Tank Regiment took part in an assault on the Broederbosch area and Kasteel Blijenbeek, just over 2 kilometres from the German frontier. The German defences here, as part of the Siegfried Line, were a maze of trenches and minefields separated by marshy ground and the regiment's losses were heavy from the start.

On 19 February 9 th Royal Tank Regiment was relieved by 147th

RAC but the attack had ground to a halt and infantry units now assumed the main role. On 7 March the brigade moved to the area around Wesel which straddles the Rhine and, in what proved to be its last battles, supported 52nd (Lowland) Division in the capture of Menzelen, south-east of Xanten, rounding up German prisoners and stragglers who were by now surrendering in large numbers. On 12 March 1945 the brigade was withdraw from the front line and was employed in pacification duties (2).

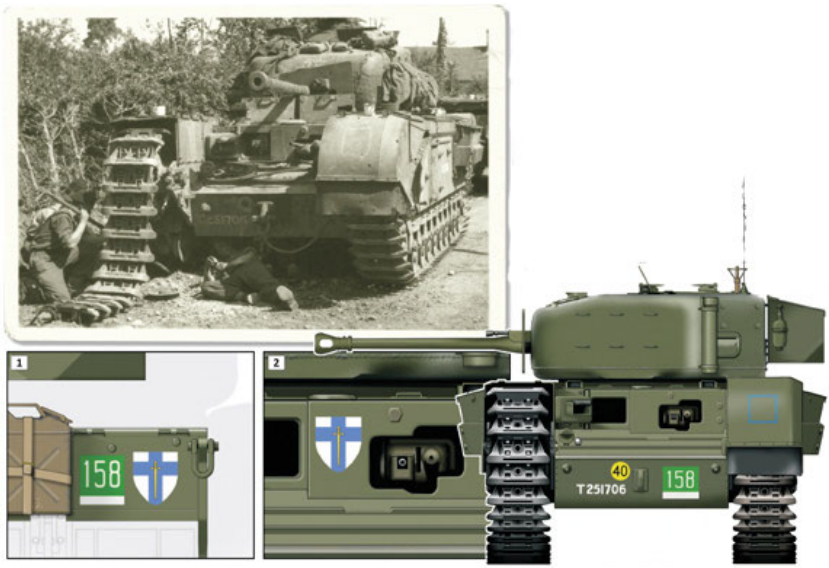
**Notes**

1. This squadron was later used to form F Squadron, 49th Armoured Personnel Carrier Regiment.

2. When the war in Europe ended on 8 May 1945 the brigade was preparing for a move to the Far East.

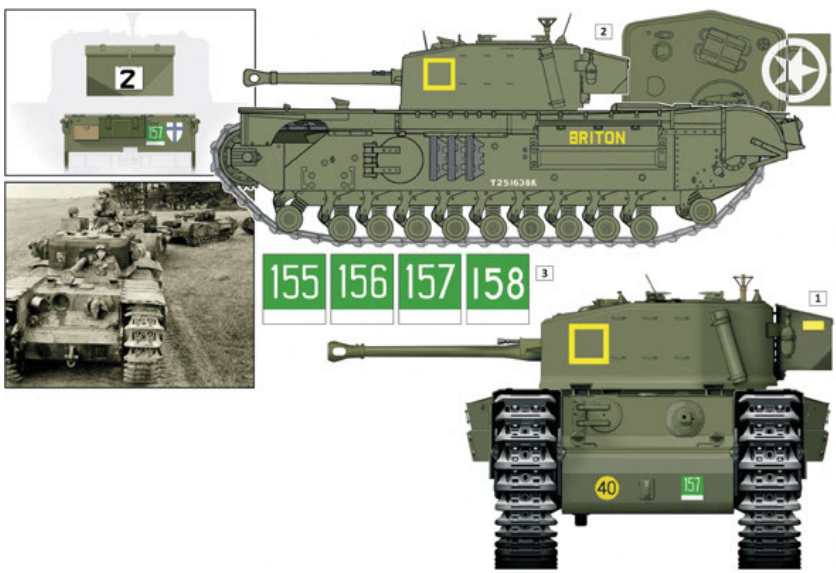
*Photographed on 17 July 1944 the formation badge of 2nd Army is clearly visible on the hull front of this Churchill Mk IV (75mm) denoting a vehicle of 34th Tank Brigade. The official caption identifying B Squadron, 107th RAC is incorrect and this vehicle is almost certainly from 153rd Regiment RAC whose cap badge is visible in the original print. At left is the cap badge of the Essex Regiment which this battalion retained when it was transferred to the Royal Armoured Corps.*

# Camouflage & Markings



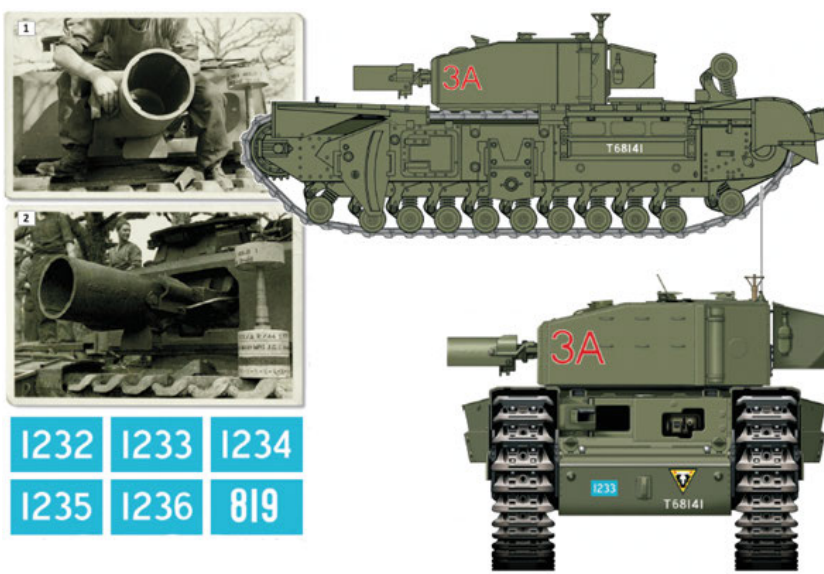

**Churchill Mk IV (75mm). B Squadron, 153rd Regiment RAC, 34th Tank Brigade. France, summer 1944. The identification with 153rd RAC, while generally believed, is somewhat debateable and its acceptance as accurate is probably based on the markings supplied with the AFV Club kit. In our photograph at left a B Squadron sign is clearly visible on the left front fender and what may have been a formation badge, painted onto the lower front hull on the left-hand side, has been covered with dirt and mud, probably deliberately. There is of course no way to confirm the colour of the squadron insignia and the ARV Mk I, which is visible in the original print, has no identifying markings. The official caption gives away very little, stating only that the photograph was taken on 4 August 1944 near Villiers-Bocage. The AFV model is almost certainly based on the tank held at the Musée des Blindés at Saumur in France, which is totally devoid of any markings, and unless another photograph of this vehicle exists there is little justification for the colourful options suggested by AFV Club**

**which include the mailed fist formation badge and earlier style of unit serial number. Of note is the shield for the QF 75mm main gun and coaxial machine gun. These were field modifications carried out in Normandy during July and August 1944 and are thought to have been restricted to the tanks of 7th RTR and 9th RTR of 31st Tank Brigade. Nevertheless I have shown this tank as it would have appeared if the identification with 153rd RAC were correct. The regiment was known to have carried the 2nd Army formation badge, confirmed by the photograph on page 53, with the arm of service sign and unit serial number in the style and positions shown here in l and 2.**




**Churchill Mk VII. B Squadron, 107th Regiment RAC, 34th Tank Brigade. France, summer 1944. Commanded by Lieutenant John Alvin Fotherglll, this tank was photographed in Normandy in mid-July 1944. The squadron sign, although covered, is visible in the series of original photographs and is depicted in yellow, identifying the second senior regiment of the brigade. The small rectangular plaque riveted to the side of the blanket box (1) bears a dedication from the Urban District Council of Bishop's Stortford, Lieutenant Fothergill's home**

town, which raised money for this tank as part of the Summer Savings Campaign. The WD number, T 251638K, is based on the markings supplied with the Tamiya kit and was indeed allocated to a Churchill Mk VII although it is quite indistinct and largely obscured in the available photographs of this tank. Note the aerial recognition sign (2) painted across the rear of the turret roof and the top of the blanket box. The arm of service sign and unit serial numbers used by 31st Tank Brigade (3) are shown here and identify, from left to right, the brigade headquarters, 147th RAC, 107th RAC and 153rd RAC. All are based on actual examples, the 153rd RAC sign being an early example, and the apparent anomaly in the sequence of numbers is discussed in the text. The white bar at the bottom of each square indicates a unit under Army command. Photographs of this tank are reproduced on page 51 were the markings are discussed further.

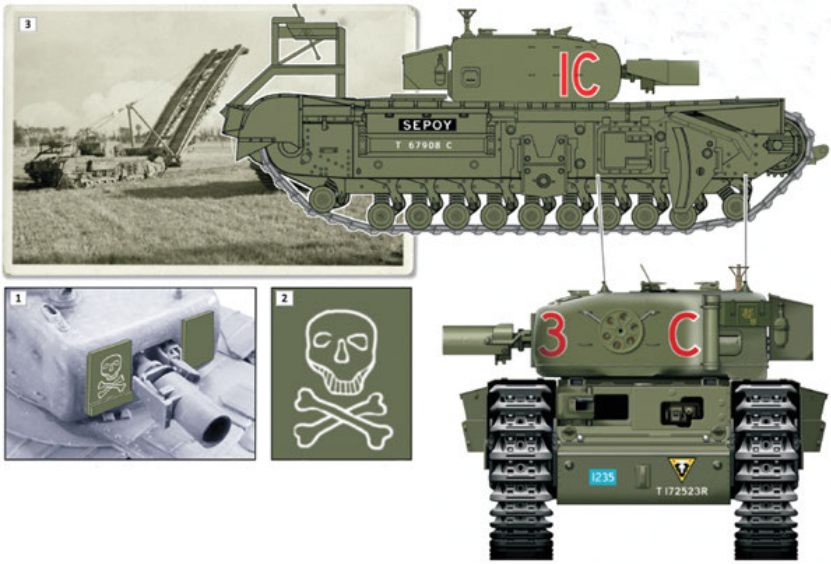



Churchill Mk III AVRE. B 5th Assault Regiment, 1st Assault Brigade, RE. Normandy, 1944. Photographed on Juno Beach on the morning of 6 June 1944, this tank is from the regiment's 26th Assault Squadron. Although it is quite impossible to

**determine colour from monochrome photographs the turret number is almost certainly red with a white outline as shown here. As mentioned in the text it was believed that these numbers identified the Troop and individual vehicle but they may have in fact indicated, for D-Day at least, the exit lane or team to which the tank was attached and the type of vehicle. The 290mm Petard spigot mortar was intended to neutralise enemy bunkers and pillboxes. Our photographs show a front view (1) and side view with the projectile (2), referred to as the Flying Dustbin. Note the applique armour on the hull sides, escape hatch and turret front indicating that this tank has been upgraded to a Mk IX. A former Royal Engineer assures me that the suffix LT was not applied to AVREs.**

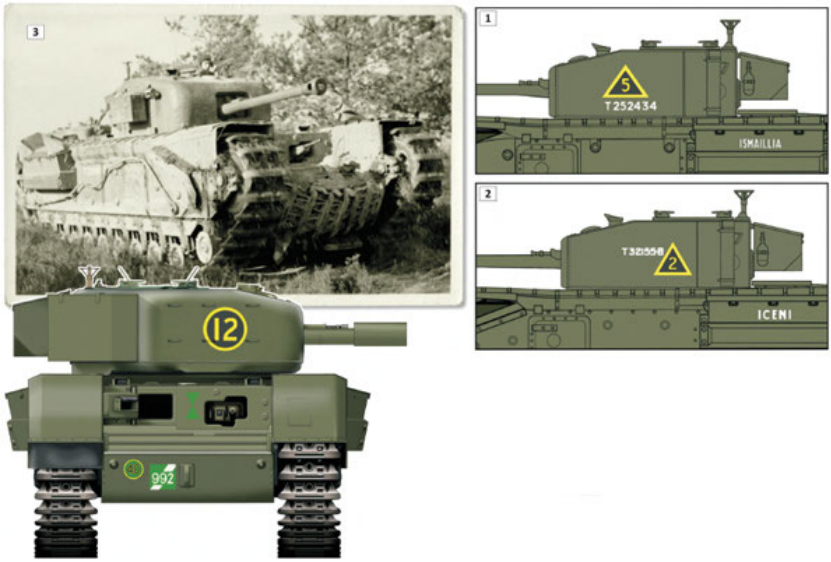
Cobalt blue arm of service signs, the colour identifying the Royal Engineers, and unit serial numbers used by 1st Assault Brigade. Top row, from left to right, brigade headquarters,5th Assault Regiment, 6th Assault Regiment. Bottom row, 42nd Assault Regiment, 149th Assault Park Squadron and 87th Assault Dozer Squadron.

**Churchill Mk IV AVRE. 6th Assault Regiment, RE. France, late September 1944. Commanded by Captain E. March of 284th Assault Squadron this tank was photographed at Noires Motte near Calais in September 1944 after it had fallen off the side of a large German concrete blockhouse. The 79th Armoured Division formation badge (1) and arm of service signs are not visible in the photograph on which this illustration is based but were carried by most, if not all, the division's tanks in the positions shown here. Although it has been suggested, rather convincingly, that the turret numbers were determined with the initial landings in mind, where the number indicated which team or lane the tank was assigned to and the letter corresponded to the device carried, the system was retained until late 1944 at least. The number was repeated on the rear of the blanket box (2) and a large aerial recognition star (3) was painted onto the turret roof. The side view at the top of the page depicts a Churchill Mk IV AVRE fitted with the attachments for the Small Box Girder (SBG) bridge. The various devices carried by these specialist vehicles are discussed in the technical section. The tank's name, Bulldog, is rendered in white on a black rectangle and the WD number has been applied to the air intake which was common with AVRE Churchills.**




All the tanks of 222nd Assault Squadron carried names beginning with the letter S, other examples being Sabre and Scimitar. Our photograph (3) shows the same tank waiting to go into action during the attack on Le Havre in September 1944.

**Churchill Mk III AVRE. 42nd Assault Regiment, 1st Assault Brigade, RE. Normandy, 1944. The identification of this tank is based on the style of turret number and it is entirely possible that it could have been allocated to another unit. The front of the turret was reinforced with plates of applique armour (1) onto which the crew have painted a skull and crossed-bones logo in white (2). It would be reasonable to assume that applique armour was also been fitted to the hull sides, upgrading this tank to a Mk IX. The WD number is completely speculative but was allocated to a Churchill Mk III AVRE tank. The side view at the top of the page depicts a Churchill Mk IV AVRE bridgelayer from 222nd Assault Squadron of 42nd Assault Regiment. The large frame at the rear of the hull held the winch which was used to lower the SBG bridge.**

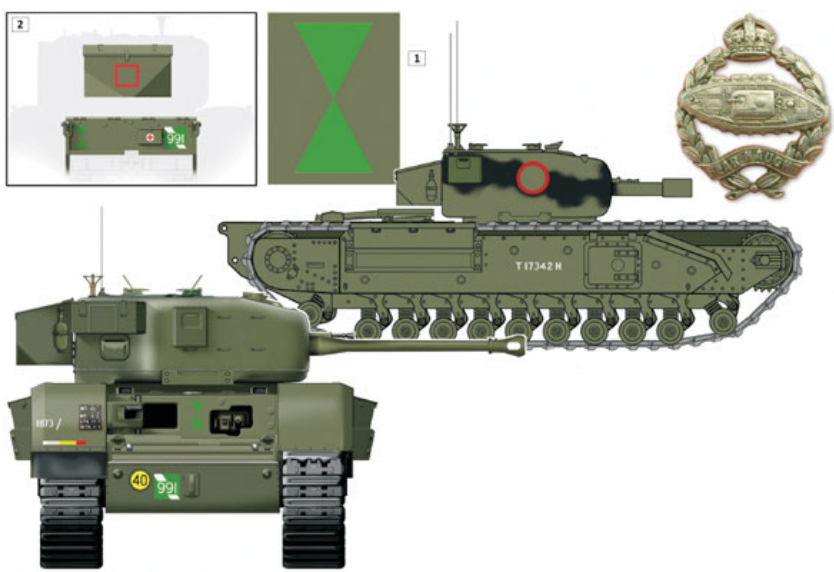



**Churchill Mk V. C Squadron, 9th Royal Tank Regiment, 31st Tank Brigade. France, summer 1944.Photographed during the fighting for Hill 112 in July 1944, the markings of this vehicle, with the exception of the C Squadron sign, are indistinct in the available image and are based on photographs of other tanks of the battalion. The dark background, probably black, of the squadron signs is confirmed by a number of photographs taken just before 9th Royal Tank Regiment left Britain for the front. Most tanks carried the brigade's green Diabolo formation badge in the position shown here next to the hull machine gun. The style of numbering used for the unit serial number was retained until February 1945 and is in many cases quite different to the commercially-available waterslide transfers. Note that the diagonal bar denoting a unit commanded at Army Group level is incorrectly reversed and this is evident in several photographs. The official marking system is shown on the following page. The battalion's tanks were all named beginning with the letter I in a tradition which dated to the 1914-18 war and the examples shown here (1 and 2) are both confirmed by photographs. Note that the WD numbers are rendered in distinctly different styles. These highly visible markings would largely disappear as the Normandy campaign**

**wore on, covered by dust and dirt with spare track links adding extra protection, and the 9th Royal Tank Regiment Churchill Mk IV shown in our photograph (3) is typical. The squadron signs, albeit without the dark background, were retained and a later vehicle is shown on page 26. The boxes attached to the turret sides were an identifying feature of the brigade's tanks, particularly 7th and 9th Royal Tank Regiments.**

**Churchill Mk IX LT. B Squadron, 7th Royal Tank Regiment, 31st Tank Brigade. France, summer 1944.Photographed during the fighting in Normandy this Mk III* has been upgraded to a Mk IX, fitted with applique armour but retaining its original turret. As with most tanks of this battalion the squadron sign is carried at the turret front, painted onto the additional armour plates (1), with the arm of service sign and unit serial number carried on the lower hull. All tanks were marked with a bridge classification circle indicating the vehicle's weight on tons, in this case 40. These markings varied in colour, style and size and a typical selection is shown throughout this book. The WD number, T 6906/B, is correct for this tank. The camouflage is**

made up of a net and strips of hessian dyed green and was commonly seen in Normandy. Our photograph (2) shows a Churchill Mk IV of the regimental headquarters and the diamond-shaped squadron sign can be seen on the front of the turret. This is in fact the tank shown in the photograph on page 12. Just visible is a dark band around the turret similar to that seen on the Churchill Mk V depicted on page 24. The brigade's green arm of service square incorporates the diagonal bar identifying a unit commanded at Army Group level and those shown above represent, from left to right, the brigade headquarters, 7th Royal Tank Regiment, 9th Royal Tank Regiment and 153rd Regiment RAC. The classification Churchill Mk III* referred to a Mk III tank refitted with the QF 75mm main gun.



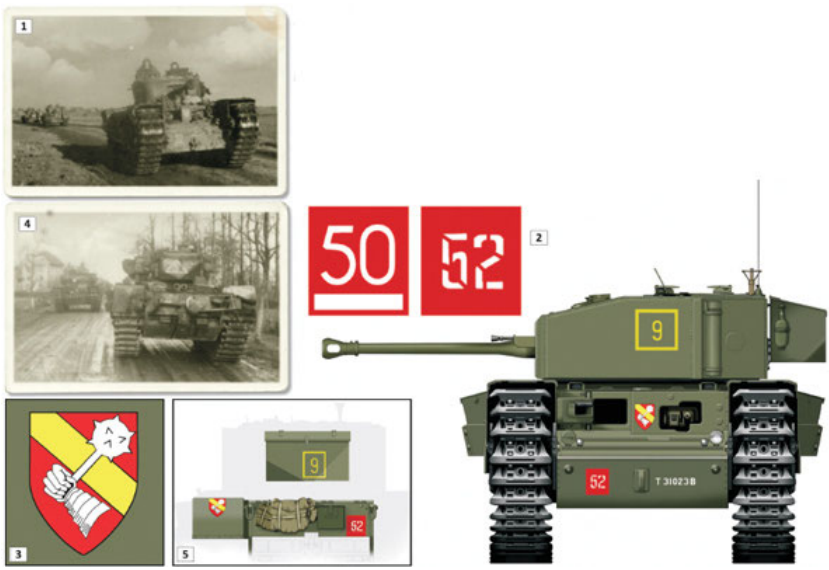

Churchill Mk IV (75mm). B Squadron, 7th Royal Tank Regiment, 31st Tank Brigade. France, summer 1944.Photographed on 26 June 1944 during Operation Epsom, this tank carries the green Diabolo formation badge of 31st Tank Brigade (1) on the hull front next to the hull machine gun. The shade in which this was rendered is very similar to

**the base coat and is easily missed in monochrome period images. The ammunition boxes welded to the turret side were a common feature of the tanks of this brigade, particularly this battalion and 9th Royal Tank Regiment. The black-and-white loading label on the right-hand fender was a feature common to many vehicles during the early stages of the Normandy campaign and gave the tank's weight and dimensions. The number 1873 probably refers to a landing craft although I can offer no explanation as to the significance of the coloured bar on the right-hand fender. The colours are of course speculative but the difference in the shades is quite clear in the original print. Photographs of other tanks of this battalion show that squadron signs were painted on the rear of the blanket box (2), in red for the senior regiment of the brigade. The side view at the top of the page depicts a Churchill Mk V Close Support tank of C Squadron, 7th Royal Tank Regiment photographed in October 1944 near Dunkirk when the battalion was attached to 34th Armoured Brigade. The dark band around the turret is probably the remnants of a sealing compound left from the waterproofing process which many tanks underwent prior to the initial landings. It is, however, remarkably similar in shape and size to the marking visible on the turret of the Churchill Mk IV shown in the photograph on the previous page. Additionally, the squadron sign seems to have been carefully painted over the dark colour. The WD number is not correct for this vehicle, although it was allocated to a 95mm-armed tank, and is included here only to show the usual placement.**

**Churchill Mk IV (75mm). 4th Battalion Grenadier Guards, 6th Guards Tank Brigade. The name Kingston identifies this as a tank of the 2nd Squadron's 6 Troop. Photographed in November 1944, this tank retains the early green arm of service square with three digit unit serial number (3). The WD number is speculative.**

**Churchill Mk IV (75mm). 4th Battalion Grenadier Guards. France, August 1944. The tank depicted here is a reconstruction of the vehicle shown in the photograph on page 5 where the squadron sign and troop number has been covered in what appears to be a thick coating of mud. The tanks of the battalion were all named for English towns, with those of 5 Troop beginning with the letter F. The names were painted onto the air intake (1) in the style shown here in red with a white drop shadow. Troop numbers were repeated on the rear of the blanket box (2), sometimes without the squadron sign (3), and the battalion's arm of service square together with the formation badge were carried on the front and rear of the hull. In February 1945, when the independent tank brigades were**

**renamed as armoured brigades, they adopted the unit serial numbers used by the brigades attached to armoured divisions where the sequence of 50 to 53 identified the brigade headquarters, the senior, second senior and junior regiments respectively replacing 151 to 154 for the Guards brigade (4). The white bar denoting units commanded at Army level was retained in most instances.**




**Churchill Mk III* 75mm. B Squadron, 9th Royal Tank Regiment, 34th Armoured Brigade. Germany, spring 1945. Photographed in the town of Bauchem, west of Geilenkirchen in Germany, this tank is identified by the unit serial number of 52 on a red arm of service square which was adopted when the brigade was renamed as 34th Armoured Brigade in February 1945. The earlier system, shown in detail on page 20, was replaced by the 50 to 53 number sequence rendered in white on a red square. Some tanks retained the white bar denoting a formation under Army command (1) although this was sometimes omitted (2). Note also the disparity in the numbering styles. The brigade's colourful unit insignia (3) is quite clear in our photograph and in some instances was**

**repeated on the rear hull or fenders (4). Contrary to some accounts, I believe that this badge was not in use until very late in the campaign, possibly not until early 1945, and I have been unable to find a single instance of its use in conjunction with the 2nd Army shield which identified the brigade during the fighting in Normandy and is shown on page 17. I would, however, be happy to be proven incorrect. The squadron sign and troop number are rendered in yellow, denoting the second senior regiment of a brigade, on both the turret sides and rear of the blanket box (5). Although this illustration is based on a series of film stills, which allowed us to view it from several angles, the lower portion of the hull front was not visible and our illustration is speculative but entirely probable with the unit serial number and arm of service sign depicted in the same style as that painted onto the rear hull. The WD number, however, belongs to another tank of this type and is included here only to show its likely placement.**

# Model Showcase

## Churchill Mk IV

**ENGLAND 1944**

**1/35 Scale**

**MARCOS SERRA**

*Marcos' model is based on the AFV Club kit which comes with a turned aluminium version of the QF 6pdr Mk V long barrel gun, identified by the counterweight at the end of the barrel. The kit's plastic Besa machine*

*guns were replaced with metal parts from RB Models and Marco's personal mud mixture was used to weather the tank. The markings are those supplied by AFV Club and depict a vehicle of 4th Grenadier Guards..*

# Churchill Mk IV AVRE

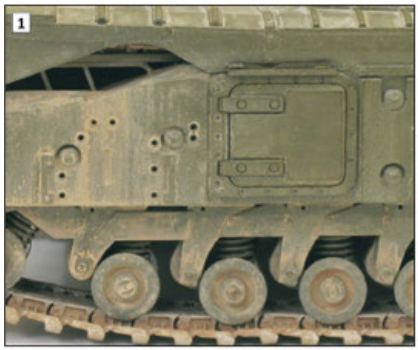
**NORMANDY AND NORTHERN FRANCE 1944**

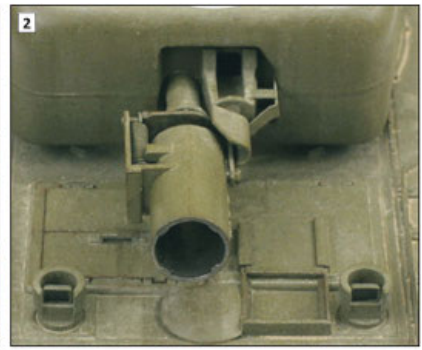
**1/35 Scale**

**SHENG HUI**

*Chinese modeller Sheng Hui is the owner of ROCHM Model, a company that specialises In high-quality, detailed conversion parts and accessories for armour kits. The model shown here is based on the AFV Club MkIV AVRE with many added small details. This kit features both the early tracks, rendered in hard plastic as Individual links, and the later version*

*reproduced as a single length part in vinyl. The tracks used here are the early, individual-link models.*



*1. Detail of the applique armour fitted to reworked Churchill Mk III and Mk IV tanks. 2. The Petard mortar and raised periscopes. Note the sliding hatch on the left-hand side of the hull which was a feature of these specialist tanks. 2. The loader's hatch of the turret and periscope with cover. The small handles on the turret side were added from thin wire. Note the roughened texture of the cast turret. 4. The commander's cupola. Below. A rear view of the completed model. The weathering effect is extremely realistic and although subtle was only achieved after hours of painstaking work.*

# Churchill Mk VII

# Crocodile

**NORTH-WEST EUROPE 1945**

**1/35 Scale**

**ANTONIO MARTIN TELLO**

*Antonio's models will be familiar to many readers from the second book in this series on the Sherman and the sample of his work show here is just as beautifully crafted. Based on the Tamiya Crocodile kit, Antonio*

*has added a number of small details and personalised the trailer with the addition of the crew's baggage.*

*Although the model is very well constructed, the really impressive feature is the painting and weathering. Obviously taking as his inspiration the 141st RAC Crocodile shown in our photograph on the previous page, Antonio has been able to achieve a completely realistically worn and dirty finish. Products used were Tamiya Acrylics with Vallejo oil washes and pigments. Raised from 7th Battalion Royal East Kent Regiment (The Buffs), this unit chose to retain its regimental distinctions including the cap badge albeit in the silver metal finish of the Royal Armoured Corps as shown here.*

# Churchill Mk VII AVRE

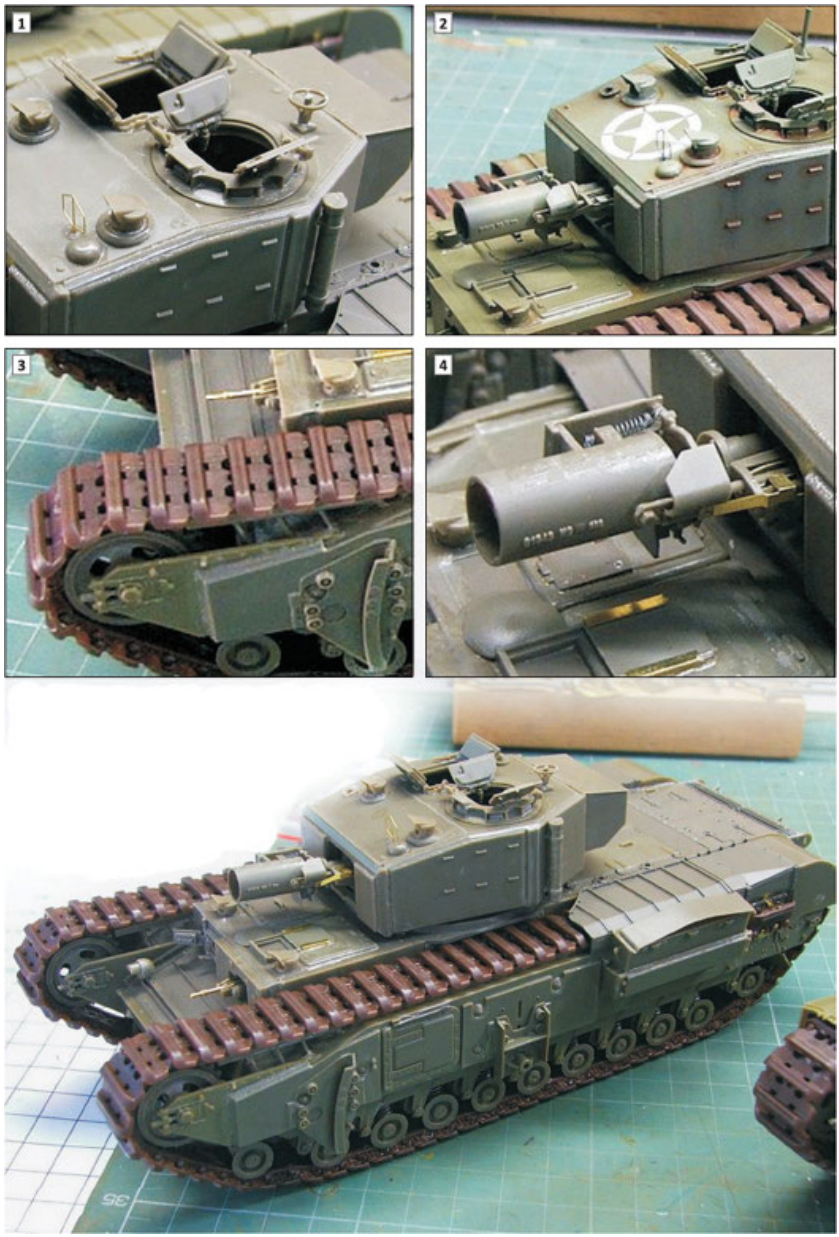
**NORMANDY AND NORTHERN FRANCE 1944**

**1/35 Scale**

**MARCOS SERRA**

*Brazilian modeller Marcos Serra's ambition is to build every version of the Churchill in miniature form including the many specialist conversions. The model shown here was built using the AFV Club Mk*

*IIIAVRE with the kit's vinyl tracks replaced by the hard plastic early style Heavy Cast Steel tracks from the AFV Club Churchill British Infantry Tank track conversion set. The photograph at right shows the Petard spigot mortar and its 290mm projectile. Note the Royal Engineers cap badge, an example of which is also shown here.*




*1. The fully-assembled Mk III turret. The All Round Vision (ARV) cupola is standard with this kit and was incorporated into production and also retro-fitted to tanks from late 1944. 2. The fully-assembled and*

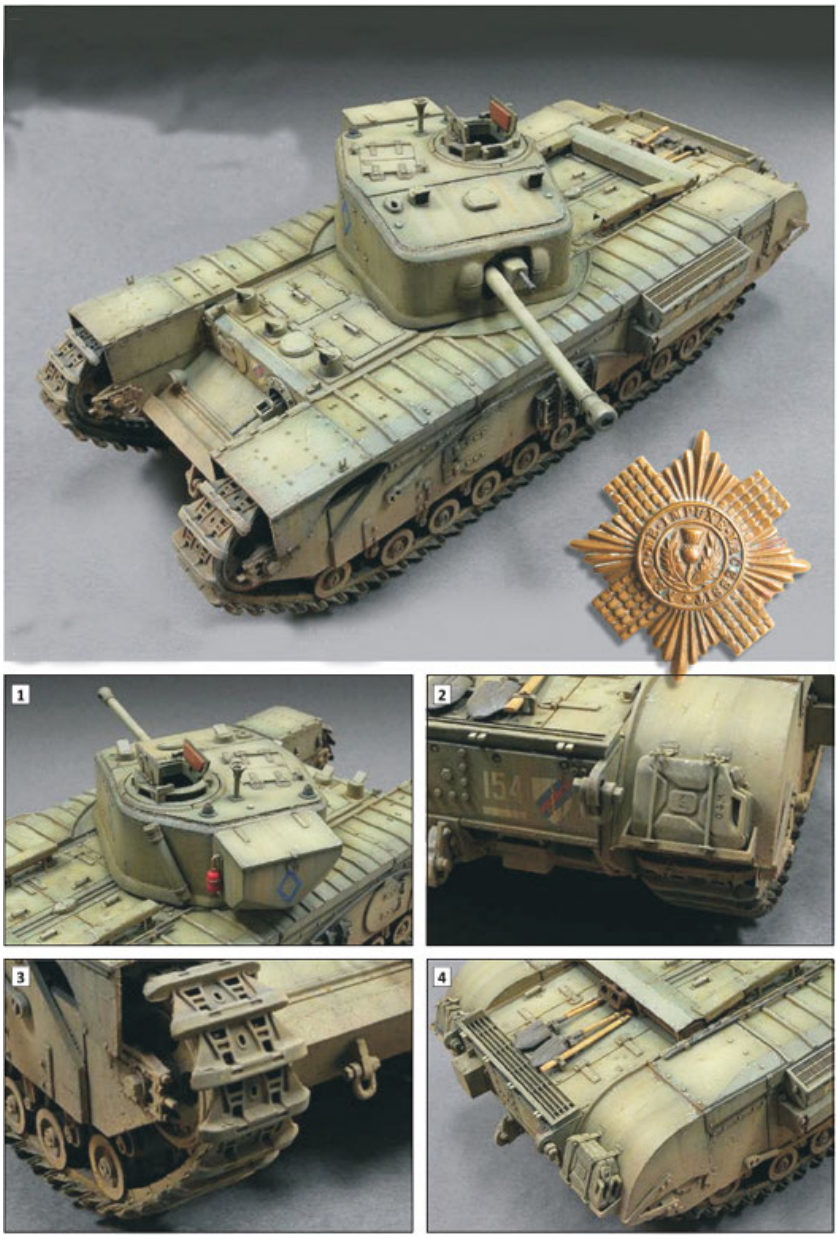
*painted turret with the Allied aerial recognition star and circle. 3. A close-up view of the AFV Club hard plastic tracks. 4. The very detailed 290mm Petard mortar complete with casting marks. The photo-etched brass parts are included in the kit. Below: The completed model ready for painting.*

# Churchill Mk VII

**NORTHERN EUROPE 1944**

**1/35 Scale**

**JOHN THAM**

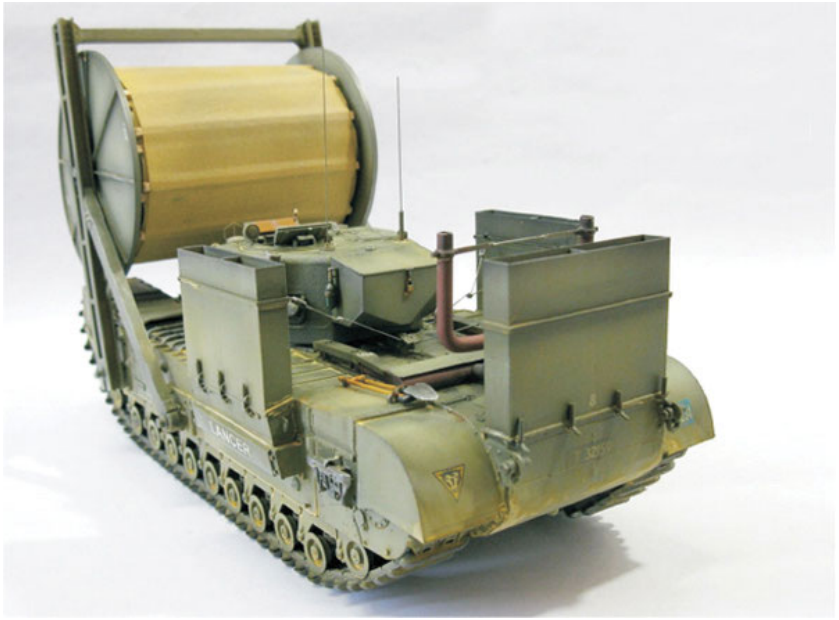


*This beautifully constructed and painted model is based on the Tamiya Churchill Mk VII kit in 1/35 scale and represents a tank of 3rd Scots Guards.*

*The cap badge shown at far right is the Second World War brass version for the Scots Guards.*

*1. The turret roof showing the All Round Vision (ARV) cupola introduced in late 1944. The blue squadron sign identifies the headquarters of the brigade's junior regiment. 2. The hull rear. The brigade's formation badge is depicted as is the unit serial number and arm of service sign in use until early 1945 when it was replaced by the version shown on page 62. 3. The later Light Cast Steel tracks that are provided with the kit. 4. The hull rear deck showing the tools in their brackets and the exhausts.*

*John's past credits include Grand Winner of the Singapore Tamiya Modelling Competition and a silver medal from the world Modelling Expo held in Girona, Spain, so the very high quality of this model should come as no surprise. His model of a Sherman firefly was featured in the second book in this series.*



*Marcos Serra's mission to build every version of the Churchill continues with this model of the Churchill AVRE Mk IV Carpetlayer Type D based on the AFV Club Mk III kit. Built almost straight from the box with the addition of a Mk IV turret Marcos' replica represents a tank of 6th Assault Regiment, RE that took part in the Normandy landings.*

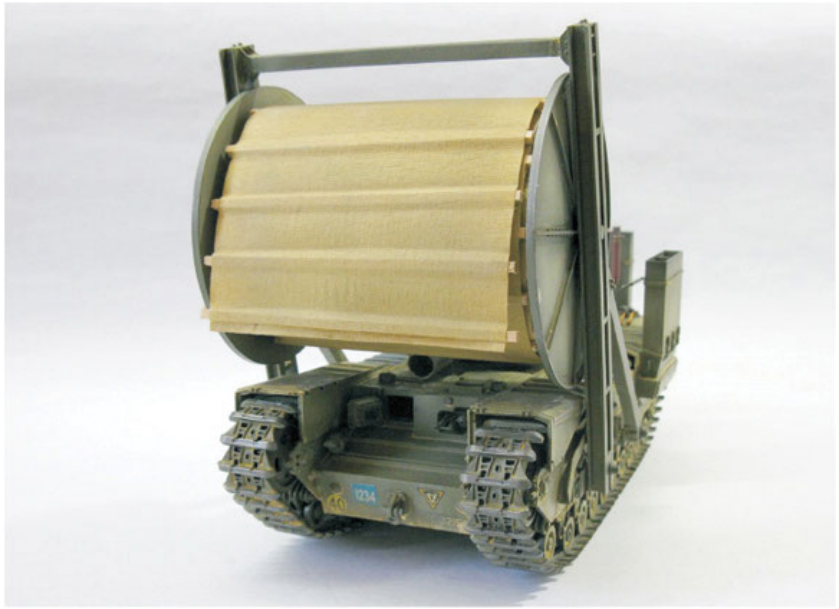
# Churchill Mk IV AVRE

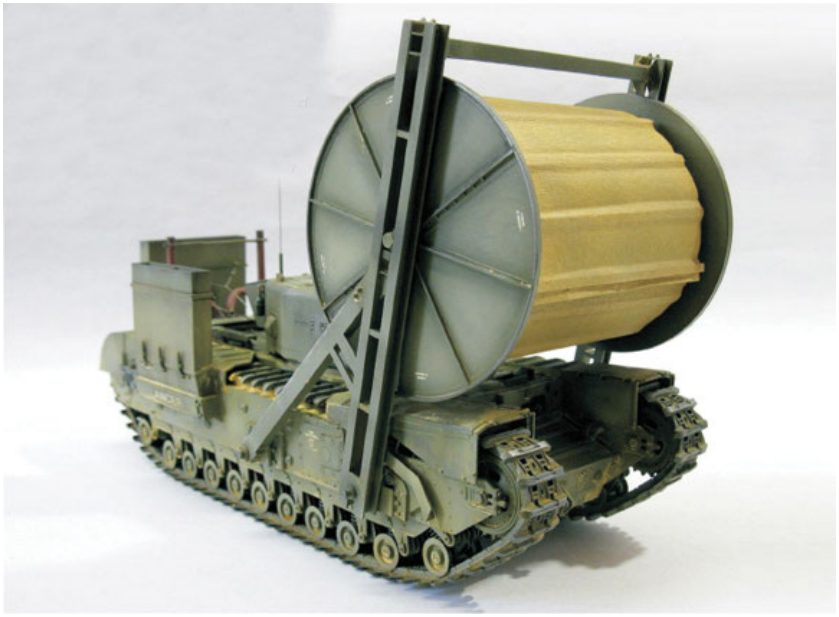
**NORMANDY 1944**

**1/35 Scale**

**MARCOS SERRA**

LANCER





*The very convincing carpet is supplied with the kit and is made up of two sheets of paper which have an adhesive applied to one side. A number of small wooden stakes are also included and I should mention that several reviewers have questioned the inclusion of the wooden parts, suggesting that metal poles were used on the rollers that were employed in D-Day landings. The tracks of this kit are the single-length vinyl versions of the later lightweight cast models.*

*The completed model. Note the extensions to the tank's exhaust system and the wading trunks attached to the air intakes. 1. The MkIV turret is also an AFV Club product left over from a previous conversion. Marcos*

*added small details such as the antenna fittings. 2. The cables from the kit were replaced by acupuncture needles which were much thinner. 3. Marcos created the markings using Corel graphics software. The LCT loading information was commonly seen on tanks which took part in the D-Day landings. 4. A view of the turret roof showing the aerial recognition star. Note the realistic buildup of dirt and dust around the exposed tracks.*

## MODELLING PRODUCTS

The Churchill tank, named for one of Britain's best known leaders, has been a firm favourite with Allied modellers since Airfix released the first plastic kit of this tank in 1963. Although the early Airfix kit was somewhat rudimentary by today's standards, and slightly laborious to assemble, it provided hours of enjoyment for countless modellers and remains popular today, particularly with wargamers.

In 1966 Aurora released a very serviceable 1/48 scale model of the Churchill Mk III and although production of this kit continued under the K&B logo when Aurora closed its doors in the 1970s it has not been available for many years.

The Tamiya Churchill Mk VII, released in 1977, was a highly detailed and accurate kit for its time and a re-tooled version was released in 1994 marketed as both the Mk VII gun tank and the Crocodile flamethrower. Although now slightly dated, the Tamiya model does have the advantage of being affordable and a number of specialist aftermarket companies produce accessory sets to enhance the basic kit. By far the most extensive range is offered by relative newcomer AFC Club and most of the company's products are listed below. These models are almost certainly the most detailed and accurate representations on the market today. It should be noted that this list is not definitive, mostly due to reasons of space and frequent new releases. As many readers will be aware most manufacturers regularly repackage and re-released their products, often after withdrawing them from sale for some time. Also, the moulds of some firms that have ceased trading have been acquired by other companies and where this is known I have tried to make it clear.

The Churchill was one of the most versatile tanks in Britain's armoury and served in a number roles including armoured recovery and engineering tasks. The story of the field modifications made to these tanks in the Italian campaign alone is worthy of its own volume and I have therefore restricted this list, for the most part, to products relevant to the Churchills which served in Normandy and north-west Europe during the last eighteen months of the war. As with the first three books in this series I have chosen to concentrate on the most popular modelling scale of 1/35 although I have tried to include some of the smaller-scale models. A list of manufacturers, together with suggestions for further reading, can be found on page 64 of this book.

▪

***TAMIYA***

This Japanese company has transformed itself from a post-war sawmill, which produced wooden models as a sideline, into the largest producer of scale model kits in the world.

As mentioned earlier the company's 1/35 scale Churchill Mk VII was first released in 1977 and for its day was more than adequate while the retooled version is still on offer today. In recent years Tamiya has built a large range of 1/48 scale armoured vehicles and figures and although rumours of a Churchill release in that scale have persisted for years although they have so far proved to be unfounded.

*The box art for the Tamiya 1/35 scale Churchill Mk VII and below at left the Churchill Crocodile flamethrower. The markings of the Tamiya kit shown here are based on the 107th RAC tank depicted in our photograph at far left and also on pages 18 and 51. Although attractive, the Tamiya transfers are not strictly accurate. Nevertheless, this is a highly detailed kit which repays careful building and painting. Both kits are of course based on the Churchill Mk VII hull and turret.*

***AFVCLUB***

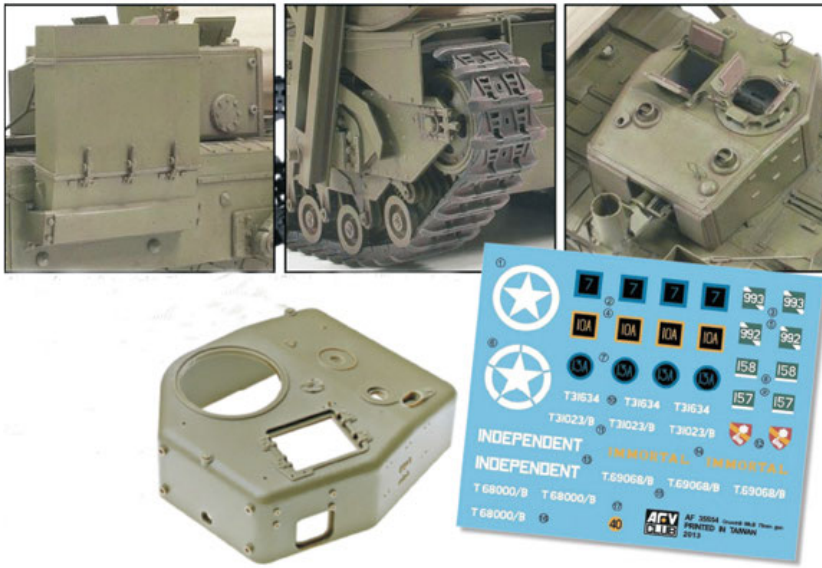
Based in Taiwan this company, a subsidiary of Hobby Fan, offers the largest and most varied range of Churchill models in 1 /35 scale.

At the time of writing the company's catalogue features a Churchill MkV 95mm, a Churchill Mk IV AVRE an early Churchill Mk III as equipped for the Dieppe raid in 1942, a Churchill AVRE Snake rocket launcher based on the Mk IV, a Churchill Mk III with the later Type D Carpet Layer and a Churchill Mk IV with the earlier

Type A, a Churchill Mk IV AVRE, fascine carrier and a Churchill Mk VI 75mm gun tank. The company also produces workable track sets and British brass rivet sets.

*The AFV Club Churchill Mk III AVRE turret with the mortar in the loading position. The applique armour on the turret front Is accurately depicted and was quite commonly seen on tanks in Normandy.*

*The AFV Club 1/35 scale Churchill Mk IV AVRE built with Hobby Fan fascine kit. Actually marketed as lumber bundles this is a four-piece resin casting. The frame and cables to hold the fascine are included with the AFV Club kit.*




*The wading stack fitted to the air intake of the Churchill Mk III AVRE. The single-piece vinyl track and part of the Bobbin attachment of the AVRE kit. An overhead view of the Churchill Mk III AVRE. This vehicle is fitted with the later All Round Vision (ARV) commander's cupola.*

*The basic casting of the Churchill Mk IV turret and the sheet of transfers that accompany the AFV Club Mk IV 75mm tank kit.*

*The AFV Club Churchill Snake Launcher conversion based on the Mk IV tank. These vehicles were fitted with explosive pipes referred to as Mine Clearing Lane Charges (MCLC), similar to Bangalore Torpedoes but larger, which could be connected and then pushed a considerable*

*distance into a minefield where they were detonated, clearing a path. While the unit markings are entirely possible both the name Cheetah and WD number T172053/C belong to the AVRE depicted in the photograph at the bottom of the page 56.*

*The Churchill Mk IV AVRE fitted with the frame to hold the fascine and the Churchill Mk IV AVRE which has the option of hull applique armour.*

*The 1/35 scale AFV Club Churchill Mk III TLC Laying Device and Carpet Type D often referred to as the Bobbin carpetlayer. This is a complete view of the tank shown in detail on the previous page. The kit comes complete with all parts to build the Bobbin attachment including the carpet which is made up of two lengths of self-adhesive paper and a number of wooden braces. Curiously, the box art depicts the latter as hollow poles as do most period photographs. A beautifully detailed and painted model can be seen on pages 36, 37 and 38.*

***DRAGON MODELS LTD***

Many readers may be surprised, as was I, that Dragon Models does not offer a 1 / 35 scale model of what was one of the most important Allied tanks of the Second World War. This Hong Kong based company does, however, manufacture a number of Churchill kits all in 1/72 scale and as with all this firm's other small scale releases these are some of the best available. Although some are marketed as vehicles operating in Tunisia and Italy all could be easily modified, usually by replacing the markings or with the addition of a muzzle brake to the main gun, to represent tanks which served in north-west Europe. The current catalogue includes a Churchill Mk III AVRE, a Churchill Mk IV and a Churchill Mk III. The Churchill Mk IV AVRE seems to have been dropped from production. In addition to the construction kits Dragon also offers a number of pre-painted models of the Churchill Mk III and Mk IV in a variety of colour schemes although not all are appropriate for the

theatre of operations and period covered by this book.

*Dragon Models box art with, from left to right, the Churchill Mk III AVRE, Churchill Mk IV with very early 6pdr gun and the Churchill Mk III painted as a tank that served in North Africa. At left: the sheet of waterslide transfers that accompany the Churchill AVRE kit. Below: Dragon Models Churchill Mk III kit. The gun is the early QF 6pdr without the counterweight with which most of these tanks would have been fitted by beginning of the north-west Europe campaign. With the exception of the gun this model would be perfectly adequate to portray one of the vehicles which took part in the Normandy battles. At the bottom of the page are two views of the Churchill Mk III AVRE kit.*

***AIRFIX***

Generations of modellers have taken their first steps into the hobby with an Airfix kit and the company, which has managed to survive numerous financial crises and changes of ownership, is today viewed as something of an institution. The original Airfix small scale Churchill Mk VII, first released in 1963, used as the basis of a Crocodile and a Bridgelayer kit both released in 2008.

*At left: The Airfix Bridgelayer Kit Kit straight from the box. Above: The box art for the Aifix Churchill MK VII Crocodile. The hull, chassis and tracks of both kits are identical.*

***MATCHBOX/REVELL***

Together with Airfix this company was one of the pioneers of the

plastic modelling world. During the 1970s Matchbox produced an extensive range of model kits in 1 /76 scale including a Churchill Mk IV AVRE Bridgelayer. When Match box ceased trading a number of the firm's armoured vehicle kits, including the Churchill, were released by Revell Germany in the 1990s and continue to make an appearance from time to time. Versions of the Matchbox Churchill marketed by Shanghai Universal Plastic Toys (SUPT) are often assumed to be pirated copies, probably due to the incorrect spelling on many of the boxes, although they are legitimately produced under license.

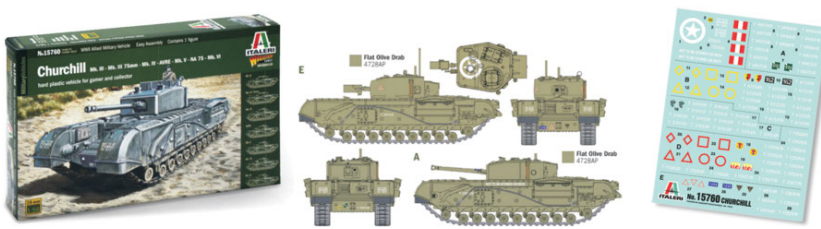
***HASEGAWA***

This Japanese company first produced wooden models in 1941 and although many of its newer releases build into highly-detailed replicas the older kits range from decidedly basic to wildly inaccurate, While the Hasegawa Churchill Mk I, first released in the 1970s, compares poorly with the latest releases from Dragon, with the tracks being particularly worrisome it is proportionately accurate and the only injection moulded example of this early Churchill available in 1 /72 scale.

*The box art for the Hasegawa Churchill Mk I. A Churchill Mk IV CS tank built by the author using the Hasegawa kit as a basis. Hasegawa's publicity shot of their Churchill kit. Apart from the rudimentary detail themodel shown here does suffer from sloppy construction.*

***ITALERI***

This Italian company has been producing plastic models since its foundation in 1962. When the ESCI plastic model company ceased production ITaleri were able to buy a number of the moulds and has continued to manufactured these kits under their own logo. ESCI was the first model company to replace the soft plastic tracks in many of their kits with what have come to be known as link ans length tracks giving a more realistic appearance to their model tanks and italeri have continued the practice. Strangely the ESCI Kit was marketed as a churchill MK IV when even the well-presented box art depicted a MK III tank. Of the larger model manufactures Italeri alone has ventured into 1/56 scale, a size which complements 28mm wargames figures, and offers a Churchill MK III which can be built as a 6pdr or 75mm gun tank, an AVRE or the NA75version which served in the Mediterrancean.




*The 1/56 scale Chruchill with two of the possible variants shown here with the extensive transfer sheet that accompanies the 1/72 scale churchill MK III.*

***MILCAST/DAN TAYLOR MODELWORKS***

Founded in the 1970s, Milicast has steadily updated its range of resin cast models and today offers a Battlefiled Series for wargamers and a Premier Range of more detailed kits. The ranges include more than twenty different Churchill kits from the Mk I to the Mk IX, including the specialist Royal Engineer tanks used during the Normandy landings. All models are to 1/76 scale. In 2008 Dan Taylor, a former master model maker to Milicast and Accurate Armour, formed his own company and works closely with Milicast, most of the casting being done by that company. Dan Taylor deals primarily in 1/76 scale with subjects related to the Normandy landings and the subsequent campaign including conversion sets and landing craft. The company also produces a large range of transfer sets for both British and German units which are shown on page 48.

*Bobbin Carpet Layer with metal slats Milicast Kit number UK127*

*AVRE with full track guards Milicast Kit number 8b080*

*AVRE with wading trunks Milicast Kit number BB080DW*

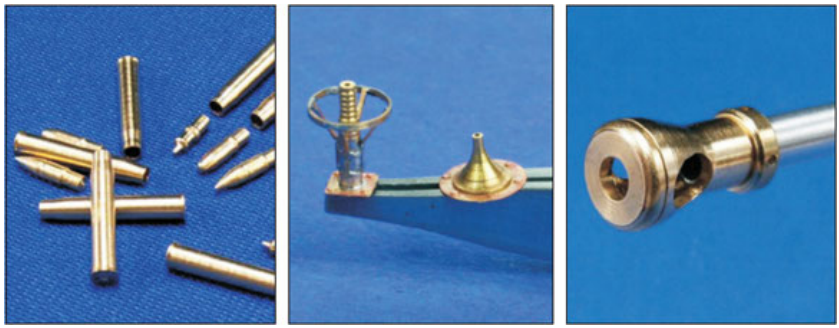
***PLASTIC SOLDIER COMPANY***

This British company produces plastic injection moulded 1 /72nd British Churchill tank kits in both 1/72 and 15mm scale, the latter equating to approximately 1/100 scale. Each sprue has options to build a Churchill Mk IV, a Mk VI 75mm, a Mk V 95mm Close Support tank or an AVRE version. Two vehicles are contained in the box and each vehicle comes with a commander figure. Containing relatively few parts and obviously aimed at wargamers these models are surprisingly detailed.

*The plastic soldier company 1/72 scale kit made up of the MKIV AVRE*

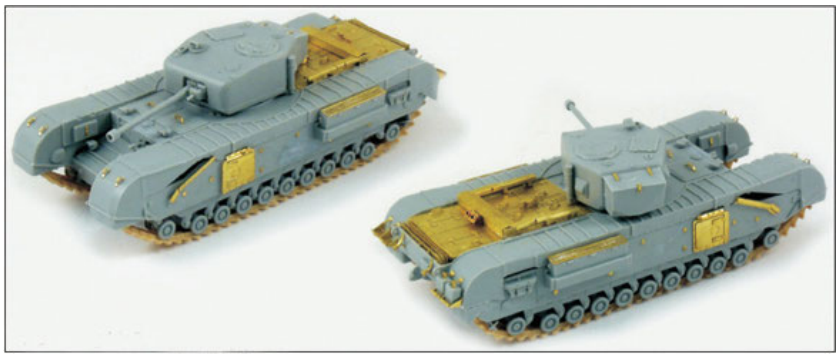
***RB MODEL***

RB Model from Poland produce a range of milled aluminium and brass gun barrels and resin accessories for 1/35 scale armour models. Shown below, from left to right, are ammunition for the 57mm OQF 6 pdr gun, a highly detailed an accurate set of British wireless antenna fittings and the muzzle brake for the 75mm OQF Mk V gun, all in 1/35 scale.



***ARMOURY MODELS GROUP***

Based in Ukraine, this recently-formed company produces a highly detailed resin and photo-etched upgrade sets. At present most of their products complement aircraft kits, however, they have released an upgrade set for the Dragon series of 1/72 scale Churchill tanks.



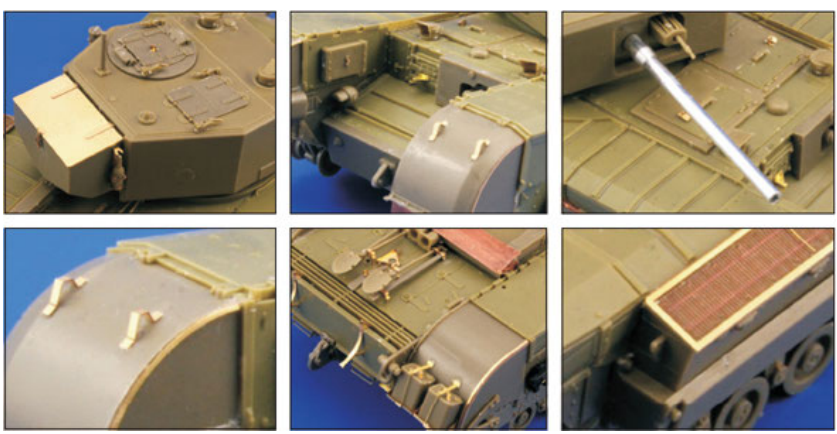
*The Armoury Models GRoup photo-etched brass detail set fited to the Dragon Models 1/72scale Chuchill MK IV.*

***BLACK DOG***

Based in the Czech Republic, this company produces a large range of detailed resin accessory and upgrade sets for armoured vehicles in 1/35, 1/48 and 1/72 scale and a small number of complete kits. At present the company offers an accessory set for the Tamiya 1/35 scale Mk VII (1) and Dragon 1/72 scale Mk IV (2), both of which include complete turrents with Hessian Camouflage.

***EDUARD MODEL ACCESSORIES***

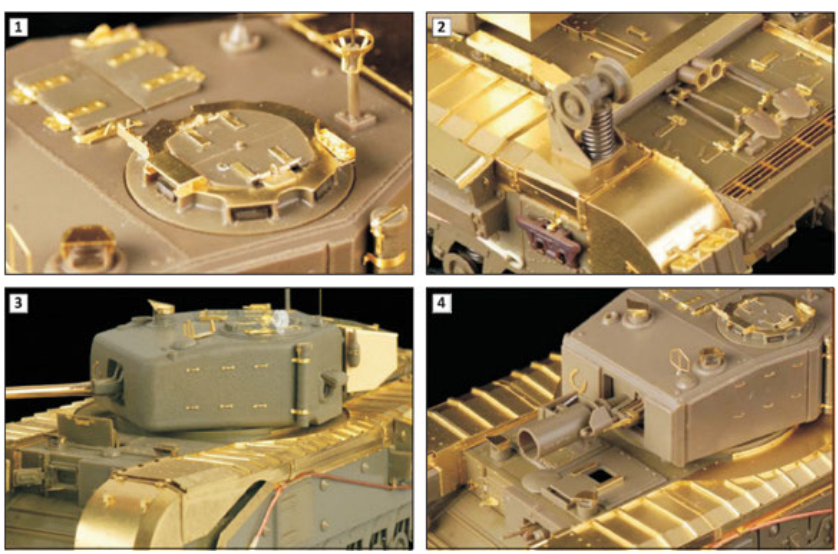
Founded in 1989 this Czech company produces high quality upgrade kits in photo-etched metal and resin and a number of complete scale models - all based on the US Sherman tank. Currently available are extensive photo-etched detail sets to update the 1/35 scale AFV Club and Tamiya models of the Churchill Mk VII and a generic Churchill upgrade set.



*Parts of the Eduard Models Churchill upgrade set. Many of the smaller items such as fuel cans and tool brackets and attachments could be used for most models of this tank. The turned aluminium gun barrel, however, depicts the early 6pdr and most, if not all, of these had been replaced by the time of the D-Day landings.*

***VOYAGER***

Voyager have been manufacturing upgrade sets for scale models since 2003 with the release of their first set for 1/35 scale armour. The company produces two sets in resin and photo-etched brass for the AFV Club Churchill Mk III (1), which can also be purchased as two single sets, a detailed, comprehensive set for the Mk III AVRE (2 and 4) and a basic set for the Mk IV (3).




***RESICAST***

Based in Belgium, Resicast produces complete kits and highly detailed conversion sets in 1/35 scale of mostly British Army subjects. In addition to the conversion sets shown here the company offers a highly detailed Churchill engine, a deep wading kit, wireless accessories and ammunition for the 6pdr gun. Items of a more general nature are British and Commonwealth ammunition boxes, fire extinguishers and telephone and medical boxes. Although the company's catalogue is quite extensive many items seem to be out of production or at least unavailable at this time.

*Shown above is a selection of conversion sets and accessories from the extensive Resicast range. 1-6: The Churchill AVRE set with the last image showing the deep wading conversion parts. 7-8: The Stowage No 1 New set. 9-11: Parts from the Stowage No 2 set. 12-14: The Churchill Ark Mk 1. Just 50 of the tanks were produced and a number were available for the D-Day landings. 15-20: The Small Box Girder (SBG) Bridgelayer conversion set. Unfortunately this kit is currently out of production at the time of writing although a number of retailers appear to have stock.*

## *AFTERMARKET TRACKS*

Although the vinyl tracks included in model kits produced over the last decade are a far cry from the unrealistic 'Rubber Band' tracks of the past, many modellers still prefer to replace the standard single length of track with a set of workable tracks made up, in the larger scales, of individual links. A number of the AFV Club kits, released as special editions, include workable tracks and the tracks supplied by the resin manufacturers are all supplied in short lengths or as individual links. The Churchill is perhaps not as well served as other tanks in the area of aftermarket track sets with just Resicast, Friulmodel and AFV Club offering 1/35 scale versions of the heavy and light cast steel tracks in resin, metal and injection moulded plastic respectively.

*AFV Club workable early-type tracks. Friulmodel late and early tracks in*

*white metal and the Resicast early tracks fitted to the AFC Club 1/35 scale Churchill Mk IVAVRE.*

▪

***MARKING OPTIONS***

Contrary to the general misconception, British tanks of the Second World War period were never an indistinguishable mass of Olive Drab, as the illustrations in this book will show. Although most kits come with a set of waterslide transfers or decals many modellers consider the research required to build a realistic replica to be an integral part of the process and the accuracy of the unit and tactical markings is as important as the technical details. Specialist manufacturers allow the modeller to depict a particular vehicle at a particular time and to add something of a personal touch to the finished model. At least one of the modellers featured in our showcase section creates his own waterslide transfers. Each image presented here shows just a portion of a particular sheet in an effort to highlight the quality of the printing and all contain multiple options.

*General British armoured unit markings produced in both 1/72 and 1/37 scale by Peddinghaus. Archer Fine Transfers WD number sheet in 1/35 scale. Aleran Miniatures British armour markings in 1/72 scale. The last two examples are also from Peddinghaus, this time in 1/35 scale. At left: The Milicast Churchill Mk IV with markings by Dan Taylor Modelworks.*

## *1ST ASSAULT BRIGADE, ROYAL ENGINEERS*

Formed during the second half of 1943 from various engineer units, the brigade was attached to 79th Armoured Division which had been saved from disbandment earlier in the year by General Sir Alan Brooke, the Chief of the Imperial General Staff, who correctly predicted the need for specialised armoured vehicles in the coming invasion. After what he called a 'happy brainwave' Alan Brooke offered the command of the division to Major-General Percy Hobart who had been instrumental in forming the embryonic 7th Armoured Division in North Africa and gone on to train 11th Armoured Division for operations in north-west Europe (1).

Both Alan Brooke and Hobart had witnessed the failure of the standard tanks sent against the beaches and fortified positions at Dieppe in 1942 and realised that specialist armoured vehicles would be needed if the invasion of France was to have any chance of success. Under Hobart's leadership the division developed tanks that were capable of clearing minefields and other obstacles, carrying and laying bridges and makeshift roadways and even 'swimming' ashore. These were all initially based on the equipment at hand, that is, the British Churchill and American Sherman tanks. These came to be known as 'Hobart's Funnies'.

*Photographed in early August 1944 passing through the town of Vaucelles, just outside Bayeux, these Churchills very conveniently carry a full set of markings. The tank nearest the camera is based on a Mk IV and has the coblat blue arm of service sign and unit serial number 1234 identifying 6th Assault Regiment, 1st Assault Brigade, RE of 79th Armoured Division. Next to the hull machine gun are two concentric circles, presumably in the yellow of the second senior regiment, enclosing what is probably a troop and individual tank number 3B in white, although the meaning of these numbers is debated as explained in the illustrations. Note that the number of the following Churchill Mk III is 3C. On the turret roof is the regulation aerial recognition sign of a white, five-pointed star within a circle while on the right mudguard can be seen*

*the 79th Armoured Division formation badge. The chalked notation is a laoding instruction and its apparent freshness would suggest that these tanks are new arrivals.*

**Notes**

1. Hobart had many detractors and was forcibly retired in 1940 for what was often referred to as his ‘unconventional approach’. He immediately joined the Home Guard and served as a Lance Corporal until he was reinstated in 1941 at the insistence of Prime Minister Churchill who read of Hobart’s sacking in one of the daily newspapers.

*Photographed in the streets of La Breche-d'Hermanville on Queen Sector of Sword Beach on the morning of 6 June 1944 this Churchill Mk IV AVRE SBG bridgelayer landed on the Normandy beaches in support of 3rd Infantry Division's 185th Infantry Brigade. Note the large attachment on the hull front which held the bridge. This tank is one of the vehicles of Major Kenneth du Blois Ferguson's 77th Squadron of 5th Assault Regiment, 1st Assault Brigade, RE although it has been associated with different units in the past. The tank's name, Bulldog, is painted in white on a black rectangle on the hull side. The turret number is almost certainly rendered in red with a white outline, as others of this regiment were, and appears much lighter here due to the vagaries of the film stock of the period. A profile of this tank is shown with an AVRE of 6th Assault Regiment on page 20.*

The division was unique in that it was never intended to operate as a single entity but rather its specialist vehicles were allocated to armoured and infantry formations as short term assets for a particular operation and later returned to the division. Importantly, the liaison offers of 79th Armoured Division who accompanied these units had the authority to recall them at any time.

Elements of the division took part in every major battle from the D-Day landings until the end of the war and any detailed account would fill many volumes. However, the operation to cross the Roer between Maastricht and Roermund into the Rhineland in early 1945, codenamed Blackcock, provides an excellent example of the way in which Hobart's armoured vehicles were employed. As an opening move, on 16 January, the Sherman Crabs of B Squadron, 1st Lothians and Border Yeomanry cleared a path through the German minefields to Dieteren, just over 3 kilometres east of the Dutch-Belgian border. On the following day two bridges into Susteren were laid under fire by the Churchill AVRE tanks of 222 Assault Squadron, RE while the Kangaroos of 1st Canadian Armoured Carrier Regiment transported the infantry of 7th Armoured Division to the outskirts of Echt. On 18 January the

Churchill Crocodiles of A Squadron, 141st RAC helped take the town, losing two tanks in the process while on the same day Sherman Crabs of C Squadron, 1st Lothians and Border Yeomanry supported 52nd Division in an attack on Lind and Stein. The battles here continued in a similar vein for another nine days with the division's tanks and personnel carriers constantly in action, switched form one sector to another, in what was essentially the preliminary manoeuvre to a much larger operation to cross the Rhine into Germany.

*Both photographs on this page were taken during the early morning of 6 June 1944 and the vehicles depicted were only yards apart. The notation 115/LCT/4 identifies this tank as one of the vehicles of 3rd Troop, 79th Assault Squadron under the command of Lieutenant William H. H. Hutchinson which landed on Queen Red beach. This group contained just one SBG bridgelayer. Note the large deep wading exhausts behind the SBGframe.*

*The Churchill Mk IV AVRE depicted in this image is sometimes associated with 1st Assault Brigade headquarters although I find this identification difficult to believe. The brigade commander, Brigadier Geoffrey Watkinson, was in overall command of the breaching teams on Juno Beach and given that this tank was situated within a few yards of the AVRE shown in the photograph above, it is more likely that this tank is also from 3 Troop of 79th Assault Squadron. In addition to the four tanks of Lieutenant Hutchinson's command a reserve containing two tanks referred to as GP, meaning they were not fitted with a specialist device as this tank was not, landed sometime later with the troop commander Captain William Ayers. The tank's name, Cheetah, is painted onto the air intake and what appears to be a letter B is partly obscured by the rolled tarpaulins on the turret side.*

*Photographed in late August 1944 this image is taken from the same series as the Churchill Mk VII Crocodile shown on page 49 and depicts the same tank. The WD number T252034/H is quite clearly visible here as is the number 50 painted onto the trailer. The latter is probably a method of numbering the regiment's trailers as other photographs of this unit's tanks would suggest. The identity of the regiment as 141st I RAC is confirmed by the cap badge worn by the tank's commander in the other photographs from this series. Interestingly a history of 79th Armoured Division written by officers of the division and printed in Hamburg in July 1945 clearly states that this regiment was attached to the division from 20 June 1944 although the official date given is the following September.*

1st Assault Brigade was made up of three Assault Regiments, numbered 5, 6 and 42, each with four Assault Squadrons, plus an Assault Park Squadron. This structure remained unchanged up to the Normandy landings in June 1944 and is shown in detail on the following page.

The regiments were equipped with Churchill AVRE, or Armoured Vehicle Royal Engineers, each armed with the 290mm Petard

mortar and fitted with specialist devices such as the Bobbin or Log carpet layer, Bullshorn mine plough, Small Box Girder (SBG) bridge, or large fascines. These are discussed further in the technical section.

The brigade's most famous action was of course the assault on the Normandy beaches where six squadrons took part in the landings. Supporting 50th (Northumberland) Division on Gold Beach were 81st Squadron under Major Robert Thompstone and 82nd Squadron commanded by Major Harold Elphinstone. A total of forty-one Churchill AVREs were landed on this beach including two command tanks and vehicles fitted with the Bobbin carpet layer device, SBG bridgelayers and fascine carriers. A further twelve tanks had no special attachment as they were detailed to push the Roly Poly, another carpet laying contraption, from the LCT which carried both to the target beach (1). On Juno Beach 26th Squadron under Major Allan Younger and 80th Squadron commanded by Major R. T. Wiltshire landed with the 3rd Canadian Division. Between forty-five and forty-seven AVRE tanks came ashore with the two squadrons and all but thirteen were equipped with either the Log or Bobbin carpet layer, SBG bridge, Bullshorn of fascine.

Landing on Sword Beach with the companies of 3rd British Infantry Division and the Sherman Crabs of 22nd Dragoons were 79th Squadron led by Major John Hanson and 77th Squadron commanded by Major Kenneth du Blois Ferguson. In overall command of the breaching teams which were tasked with clearing the exit lanes from the beach was Lieutenant-Colonel Arthur A. D. Cocks, the 5th Assault Regiment commander. The thirty-four AVRE tanks that were able to land on Sword Beach were mostly fitted with some kind of device including Bobbin and Log carpet layers, both types fitted with Bangalore torpedoes, SBG bridge layers and mine ploughs. No fascine carriers were used on this beach. In addition 79th Squadron held two AVRE tanks in reserve to support 5th Battery, Royal Marine Armoured Support Group. The German defence on this beach was particularly fierce here and Lieutenant-Colonel Cocks was killed as his tank was about to leave the LCT

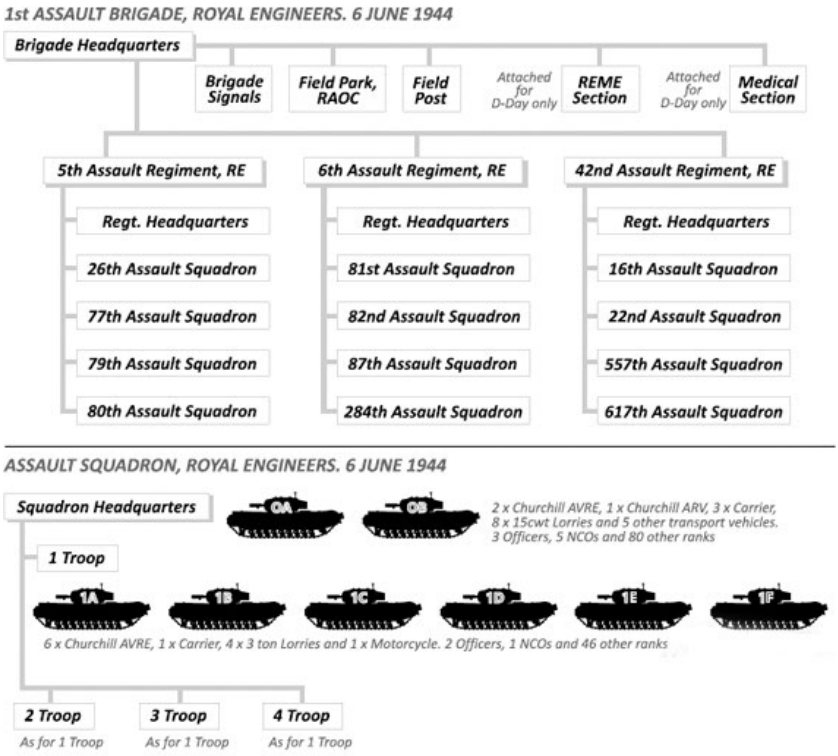
which was carrying it ashore becoming the first British officer to die in Normandy.

Mention should be made of one other unusual vehicle operated by this division. Just days before the end of the war the headquarters of 30th Armoured Brigade received two Churchill Great Eastern bridgelayers (2). Brigadier Nigel Duncan, had one of the Great Easterns fire the rockets which normally deployed the tank's bridge to celebrate the ceasefire in May 1945 and this may have been to only instance of its use in a combat zone.

**Notes**

1. Some accounts give the number of tanks as forty.

2. The Churchill Great Eastern was fitted with a lengthy trackway, hinged to a second ramp at the front of the tank, and lifted forward by three rockets which swung the upper trackway to the front and down were it landed on the far side of the obstacle. The trackway and the ramp then formed a bridge over some 60 feet in length. Just eleven of these tanks were produced, including the protoype, all using the Chuchill Mk IV fitted with the heavier suspension units of the Mk VII. The firing of the rockets was apparently quite spectacular.




*While it has generally been accepted that the turret markings of these tanks began with the troop number followed by a letter which identified the individual vehicle, as they are shown here, research carried out by Pete Andrews suggests that the numbers may have in fact related to the beach exit lane or team to which the tank was allocated and the letter may have identified a type of AVRE, for example Bstanding for SBG and C for a Bobbin carpet layer.*

*Churchill AVRE towing a sled with fascines, and another carrying a fascine, moving up for 53rd Division's attack west of Oss in Holland, 23 October1944.*

## TECHNICAL DETAILS AND MODIFICATIONS

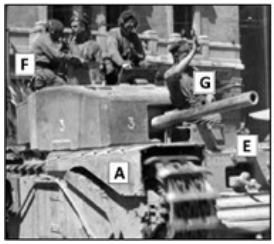
The design, development and production of the Churchill tank involved three distinct models referred to as the A20, A22 and A22F. The A20 has already been mentioned in the introduction and as it never progressed beyond the prototype stage, and consequently never saw combat, it need not concern us further. The A22 was essentially a scaled-down version of the A20, retaining the original six-cylinder engine and from this basic design would come the Churchill Mk I to Mk IV. The A22F was an attempt to remedy some of the faults of the A22 and to create a more powerful armoured fighting vehicle and this tank entered service as the Churchill Mk VII. As neither the Churchill Mk I or Mk II served with units in north-west Europe in 1944 and 1945 they have also been excluded from our narrative. Only the most exhaustive study could hope to cover the production development and the various modifications fitted to these tanks and I have tried to create here a spotter's guide that will enable modellers and interested readers to differentiate the marks and types and recognise the most important modifications. It should also be noted that many official records have been lost or destroyed and the modifications which fascinate us today would have seemed minor at the time and rarely noted, particularly given the haste with which the Churchill was developed and rushed into production. Consequently much of the information we have is based on photographic evidence and hence many modern sources differ on various points. Where this has occurred I have tried to make it clear. Note that numbers refer to the notes and letters to the photographs.

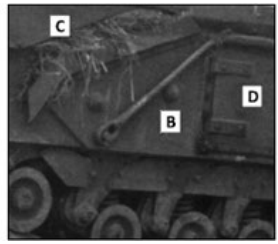
**Churchill Mk III. Based on the chassis and hull used for the Mk I and Mk II tanks a total of 675 vehicles of this Mark were produced. The Churchill Mk III was fitted with walkways along the top run of tracks (A) and large fenders at both the front**

**and rear. Part or all of the walkways and the fenders were often removed in combat. The A22 hull was bolted and riveted together and on early production tanks the bolts were slightly recessed. Later models and reworked vehicles were fitted with longer bolts which had either cone shaped covers or heads (B), the latter identified by their squared-off sides. A metal scoop (C) was fitted to the hull sides in front of the access doors (D) to direct the mud and debris which fell from the tracks downwards (1). The Mk III hull armament was a single Besa machine-gun (E) situated in the co-driver's position on the left hand side. The aperture for the hull machine gun was identical to that of the Mk II. Very early production Mk III tanks had the air intakes fitted to the Mkl and Mk II and these were replaced on new and reworked vehicles in the major upgrade programme that was undertaken in late 1942 and early 1943. The turret was a complete redesign made up of welded plates (F) and the 2pdr anti-tank gun and 3 in howitzer of the Mk I and Mk II respectively were replaced by an Ordnance Quick-Firing (OQF) 6pdr Mk III gun (G) with a coaxial Besa machine gun (2). A later version of the gun, referred to as QF 6pdr Mk V, featured a longer barrel and a distinctive counterweight and this was also retro-fitted to many tanks. Contrary to some accounts 6pdr-armed tanks were supplied with high explosive (HE) rounds for this gun and they were used to some effect in Tunisia. Interestingly a service manual published in October 1944 states that there were at least two different styles of counterweight for turrets fitted with geared elevation and those with free elevation although no further details are offered (3). Many tanks were upgraded in early 1944 by having the main gun replaced with the OQF 75mm (H) which was in fact a rebored 6pdr Mk V and the two guns were externally identical except for the new muzzle brake. These tanks were officially referred to as Mk III*.**

**Churchill Mk IV. As with the Mk III this tank utilised the basic A22 hull and chassis. The Churchill Mk IV saw a return to a cast turret, although this one was much larger than the turret of the Mk I and Mk II and was in effect a rounded version of**

**that fitted to the Mk III. In early production models the arrangement of the turret hatches and other fittings was similar to the Mk III although the Mk IV had just one periscope situated in front of the loader's hatch. The early turrets can be identified by the lack of turret race armour and the position of the ventilator on the turret roof which was close to the left-hand edge next to the lifting point. The gun aperture was similar to that of the Mk III turret being rectangular in shape with the upper left comer squared-off (4) and a small semi-circle cut out of the bottom right-hand side near the corner. These turrets were usually fitted with the 6pdr Mk III main gun during production and were rebuilt, along the Mk III tanks, some being fitted with the 75mm gun and hull applique armour. A number were also built as Armoured Vehicles, Royal Engineers (AVRE). A second production turret incorporated a thickened lower edge to protect the turret race. The ventilator was moved a few inches towards the centre of the turret and was fitted with a protective lip (1). The gun aperture was unchanged and these turrets were fitted with both the Mk III and Mk V 6pdr gun and later upgraded with the 75mm gun (2). This turret type is also seen on Mk IV AVRE tanks (I). Both the first and second types featured a distinct overhang on the bottom edge of the turret rear. The third and final version of the turret saw the ventilator moved again, almost to the exact centre, and the base of the turret reshaped to incorporate an armoured ring which protected the turret race. As there was not enough space to accommodate this ring on the right-hand side, a rectangular armoured plate was bolted to the lower edge. The squared-off comer of the gun aperture seen in the previous models was deleted and the prominent overhang at the rear of the turret was dropped from production (3). With a total production figure of 1,622 the Churchill Mk IV was numerically the most important model.**





**Notes**

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1. This is shown on the stowage diagrams produced in the first half of 1942 and was probably introduced at the same time as the walkways.

2. The 6pdr was taken into service as the 57mm antitank gun by the US Army. That the tank and gun both had the same designation Mk III is co-incidental.

3. I have been unable to find a definitive date for when the larger-calibre MkV guns were introduced but it is reasonable to say that most, if not all, Mk III guns had been replaced in northern Europe by June 1944.

4. Sources differ on this point suggesting that the aperture was completely rectangular although photographic evidence confirms that this is incorrect and it is likely that the type without the squared-off corner was only seen on some MkV tanks.

**Churchill Mk V. The Close Support (CS) version of the Churchill was based on the Mk IV and armed with the same Ordnance QF 95 mm tank howitzer that was fitted to the Cromwell CS tank. The gun aperture was slightly different to the 6pdr and 75mm equipped Mk IV turret being more rectangular in shape as described above. Just over 200 were built and they can be easily identified by the guns prominent counterweight (J).**

**Churchill Mk VI. Manufactured by Vauxhall to fill the expected gap between the end of Churchill production and the completion of the first Cromwells, these tanks were essentially the final model of the Mk IV. The War Office stipulated that as many vehicles as possible be fitted with the 75mm gun. By the time the first tanks were being assembled the Mk VII was about to enter production and many components and design elements of the new tank were incorporated into the Mk VI including the commander's cupola and loader's hatch. A number of these tanks were fitted with the All Round Vision (ARV) cupola, however, this is not an identifying feature of the Mk VI as is often stated. The arrangement of the wireless aerials was also the same as that seen on the Mk VII. With the exception of the modifications mentioned above the turret was the final production Mk IV version (4).**

**Churchill Mk VII. Seen as a major redesign and an attempt to create a heavier tank, the Churchill Mk VII was designated A22F. The armour thickness was built up from a maximum of**

**102mm to 152mm and the hull was slightly wider than the earlier models increasing weight to 40 tons and decreasing speed to 12.5 miles per hour. This version is easily distinguishable by the round hatches (K) which replaced the rectangular access doors on the hull sponsons and the distinctive turret which was made up of both cast and welded parts (L). Later models had slight bulges incorporated into the turret on either side of the main gun aperture. Later production tanks were fitted with the ARV cupola at the factories and this was also retro-fitted to a number of tanks in the field. With 1,600 vehicles produced this was an important variant and provided the basis for the Crocodile flame thower.**

**Churchill Mk VIII. This tank was a Close Support version which saw some service late in the war. It was based on the Mk VII and was identical except for the longer turret, which also had slightly different contours, and the shape of the main gun aperture which on this tank was completely rectangular. The 95mm howitzer was the same weapon fitted to the MkV.**

**Churchill Mk IX. In July 1944 it was decided that all reworked Mk III and Mk IV tanks would be fitted with applique armour on the hull sides and at the front. These tanks were also to receive the Mk VII turret but owing to a general shortage this idea was dropped in August, possibly before any conversions were completed. Those tanks that underwent the complete transformation would have been designated Churchill Mk IX while those that kept their original turret were referred to as Mk IX LT, or light turret.**

**Notes**

1. There is some evidence at the new arragement of the ventilattor

was in fact introduced on the first pattern turret.

2. The resulting conversion was referred to as Mk IV (75mm).

3. Authoritative sources state that this turret was used on all Mk V and Mk VI Churchills although it can also be seen in photographs of Mk IV and AVRE vehicles and it may have been standard on later production tanks.

4. Many of these features are difficult to discern in period photographs and these tanks are often incorrectly identified as Mk IV vehicles although they should not beconsidered as merely a Churchill Mk IV with a 75mm gun.

Photographed in Normandy during the summer of 1944 these Churchill Mk VII Crocodile flamethrower tanks are probably from 141st Regiment RAC. Although camouflaged the angles of the turret are iunmistakable. Clearly visible are the round hatches on the side of the hull and the periscopes of the ARV cupola. The Sherman tracks at the hull front provide a convenient storage space in addition to extra armour protection.

**Churchill Mk IX LT. As described above. The original Mk III and Mk IV turrets, when retained, were to be fitted with applique armour on the front surface (1).**

**Churchill Mk X. This designation applied to a Mk VI tank fully upgraded as described for the Mk IX (2).**

**Churchill Mk XI. This designation applied to a Mk V fully upgraded as described for the Mk IX and fitted with the Mk VIII turret and 95mm howitzer (3).**

**Churchill Armoured Vehicle Royal Engineers (AVRE). Based on the Mk III and Mk IV with the main gun replaced by a 290mm Petard spigot mortar. This gun fired a forty-pound high explosive projectile out to a range of 150 yards and was designed to destroy concrete obstacles such as pillboxes and bunkers. Rather unusually, this weapon needed to be reloaded externally and the sliding hatch above the co-driver's position is another identifying feature of these tanks. All were allocated to 79th Armoured Division and examples are shown throughout this book. These tanks could be adapted to carry a Bobbin carpetlayer, the SBG bridge, wooden fascines, the Bullshorn mine plough and other specialist devices (4).**

**Churchill Armoured Recovery Vehicle (ARV). The ARV Mk I was based on the chassis and hull of the Mk I and Mk II tanks with the turret removed to allow for the fitting of a demountable A-frame jib. In 1944 the ARV Mk II was produced which had a box like structure in place of the turret fitted with a dummy gun. These later vehicles were built on the Mk III and Mk IV tanks and continued in service for many years after the**

**end of the war.**

**Churchill Bridgelayer. This was a standard tank with its turret removed and replaced with a hydraulically powered arm which raised the 30ft bridge and placed it into the required position. The bridge was capable of supporting 60 tons.**

**Notes**

1. It is of course entirely possible that any number of these tanks could have been fitted with the 75mm gun at some later date as these were issued in kit form to units inthe field.

2. It is unlikely that any of these tanks was ever produced.

3. It is likely that none of these conversions was ever undertaken.

4. A version based on the Mk VII was built but was only used in the post-war years.

5. This should not be confused with the AVRE SBG bridgelayer.

A Churchill AVRE based on the Mk III. Of note is the applique armour fitted to the turret, hull sides and escape hatch, the cone-shaped bolts and the AVRE fittings which, with the 290mm mortar, were an identifying feature of these tanks.

# APPENDIX

The organisation of the British Army during the 1939-45 war and the terms used to describe its functions and formations can be extremely confusing, particularly to the uninitiated reader who may be approaching this subject for the first time. A detailed explanation of the notion of a regiment, the concept of seniority or precedence and the basic system of vehicle markings was included in the second book in this series Sherman Tanks, British Army and Royal Marines, Normandy Campaign 1944 and it may be helpful to repeat parts of that here. In 1939 the British Army was made up of a regular force of both full-time soldiers and reservists and the part-time volunteers of the Territorial Army. The Territorial Army was made up of over 200 infantry and tank battalions with the mounted regiments of the Yeomanry, some of which had been mechanised.

1. The Regiment. Unlike most other armies the meaning of the term regiment, as used within the British Army, is somewhat flexible. Infantry regiments were essentially administrative and training organisations which raised battalions to be sent on active service. The battalions were numbered sequentially and also retained the name of the regiment, for example 4th Battalion Grenadier Guards. From 1939 a number of regular infantry battalions were converted to armoured units and came under the control of the Royal Armoured Corps (RAC). Their titles incorporated the RAC number and their original name, for example 107th RAC 5th King's Own Royal Regiment. The cavalry and Yeomanry were formed into permanent regiments, which were similar in size to infantry battalions, and retained their number and title, for example 5th Royal Inniskilling Dragoon Guards and Staffordshire Yeomanry, throughout their service.

2. The Royal Tank Regiment (RTR). Formed in 1939 by renaming the Royal Tank Corps, the RTR was organised in a similar manner to the regiments of infantry, being made up of eight regular battalions when the war commenced. A further four regular battalions were raised for the duration of the war and an additional twelve war service battalions were formed from units of the Territorial Army. Thus the title 1st Royal Tank Regiment, or 1st RTR, refers to the 1st Battalion of the Royal Tank Regiment.

3. The Royal Armoured Corps. In a process which began in April 1939, and would continue until late 1944, the regular cavalry regiments - including the Household Cavalry with the Regiments of Horse and the cavalry of the line - the battalions of the Royal Tank Regiment, most of the Yeomanry regiments (1), a number of converted infantry battalions (2) and the units of the Reconnaissance Corps gradually came under the control of the Royal Armoured Corps. The RAC was responsible for the training and support of the armoured units although as the war progressed, as mentioned above, a number of infantry formations were converted to armoured units and came under its direct control.

4. Seniority. The principle of seniority, or more correctly precedence, is one of the pillars on which the British Army is built and the concept dates back to the time when the entire army would parade before the monarch with the most senior unit taking the place of honour on the right flank. This is a complex subject and for our purposes I will restrict the narrative to the units of the RAC. Regiments and battalions were combined into brigades which were purely temporary formations. In general terms, seniority within the brigade was largely dependent upon when a regiment or battalion was raised, with regular army regiments and battalions taking precedence over Yeomanry and Territorial units (3). The battalions described in the text as part of a brigade are all given in order of precedence.

Photographed near Celle, north-east of Hannover, on 11 April 1945 these tanks of B Squadron, 3rd Scots Guards are identified by the unit serial number 53 which follows the sequence introduced in February. Interestingly, photographs of the Grenadier Guards tanks taken at the same time show that the old system was retained on some tanks. Note the squadron sign and troop number painted on the rear of the blanket box on the tanks in the background. The vehicle nearest the camera is a Mk VII while the others are probably Mk IV models

**Notes**

1. A number of Yeomanry regiments served with the Royal Artillery.

2. The infantry battalions converted to Regiments of the RAC were given the choice of retaining their regimental distinctions, such as cap badges, or wearing those of the RAC.

3. For example the regular battalions of the Royal Tank Regiment,

which was formed in 1916 as the Royal Tank Corps, would take precedence over a regiment of the Yeomanry but would be considered junior to 8th King's Royal Irish Hussars, a regular cavalry regiment which traced its lineage back to 1693.

5. Vehicle Markings

A. War Department (WD) Numbers. These numbers were an individual identifier issued for all vehicles, including trailers, by the War Office. Each number was prefixed by a letter describing the type of vehicle, T in the case of a tank, and painted onto a suitable surface. The vehicle retained its WD number for the duration of its service life.

B. Bridge Classification Numbers. All British Army vehicles carried a sign indicating their weight class. The most common form this took was of a yellow circle with a black number indicating the vehicle's weight in tons although variations in style and colour existed.

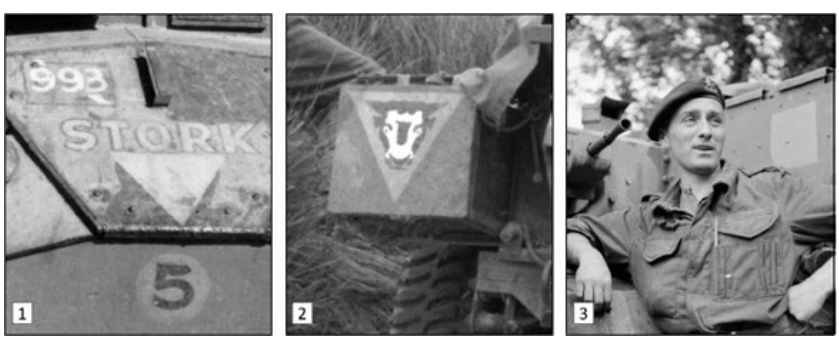
C. Recognition Markings. From July 1943 a large white star enclosed by a ring was introduced as an aerial recognition sign to replace the RAF roundel then in use. On Churchill tanks this was usually applied to the turret roof. The red/white/red RAC flash introduced in early 1942 was rarely encountered by June 1944.

D. Formation Badges. Officially all vehicles carried the badge of the higher formation. Often incorporating intricate and colourful features, sizes, colours and designs varied widely between formations and examples are shown in the illustration section.

E. Unit Serial Numbers and Arm of Service Colours. Sometimes referred to incorrectly as arm of service or AoS signs or squares,

these coloured markings identified a regiment or battalion within a brigade or higher formation. Each sign was made up of a unit serial number painted in white onto a rectangle of the appropriate arm of service colour or colours (1). The addition of white bars indicated units which came under Army or Army Group command and examples are shown in the illustration section. In February 1945, when the tank brigades were renamed as armoured brigades, all previous unit serial numbers were replaced by the sequence 50 to 53 in white on a red square which identified the brigade headquarters, the senior regiment, the second senior regiment and the junior regiment respectively.

F. Armoured Vehicle Tactical Signs. Each squadron within the regiment was represented by a tactical sign. These took the form of a geometric shape painted onto the tank. Regimental HQ and the headquarters squadron was identified by a diamond, A Squadron by a triangle, B Squadron a square and C Squadron by a circle. The sequence of colours was usually red, yellow and blue indicating senior, second senior and junior regiments respectively. The style, size and application of these markings varied considerably and examples can be seen in the photographs and in illustration section.




1. Unit serial number on an appropriate arm of service sign for 141st RAC with a weight classification circle. I can offer no explanation as to the meaning of the inverted triangle. 2. 79th Armoured Division formation badge. 3. Trooper McGuiness of 107th

RAC once again, this time standing in front of a patch of poison gas detection paint.

6. Camouflage Colours. All colours for use with vehicle camouflage and their application were stipulated in British Standard (BS) 381C of 1930 and BS 987C of 1942. The colours in use at the time of the Normandy Campaign and that need to concern us are:

Standard Camouflage Colour (SCC 2). Sometimes referred to as brown, khaki brown or service drab and described as a rich, dark brown tending towards khaki. Although this colour was replaced in April 1944 by SCC 15 it could be seen for some time after that as paints were customarily used until stocks were exhausted.

Standard Camouflage Colour (SCC 15). Introduced in April 1944 this colour was referred to as Olive Drab and was very similar to the US Army colour of the same name, the major difference was that it tended to fade to a greener shade. Vehicles returned for extensive repairs would very probably have been repainted with SCC 15.

**Notes**

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1. Officially the rectangle was to be of 8½ inches width and 9½ inches height, with the number being 6 inches high. In practice, however, the shape could vary from the approved size to a square of between 10 and 12 inches.

## PRODUCT CONTACT LIST

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Modelkasten

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Black Dog

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Archer Fine Transfers

PO Box 1277. Youngsville, NC 27596

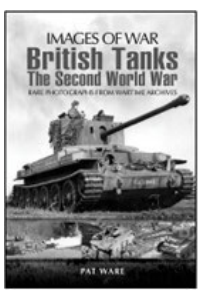
USA

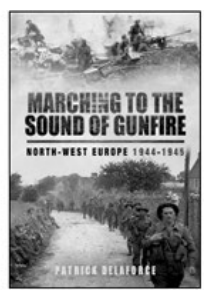
http://www.archertransfers.com

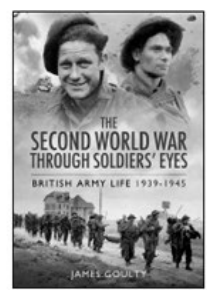
In creating this book I have endeavoured to provide the reader and modeller with an understanding of what may have been the most important armoured fighting vehicle produced by Britain during the 1939-45 war. A complete history of the development and use of the Churchill tank would fill many volumes and we have chosen a small slice of history to better focus on what is a complex subject. Nevertheless, there is much that could not be included and I would direct the reader to some of the sources that I was fortunate enough to be able to use. I referred extensively to David Fletcher's research, in particular Mr Churchill's Tank which although first published a I most twenty years ago is still an important work on the subject. Asa detailed history of the tank and the units which employed it, The Churchill by Bryan Perret was also useful. Cracking Hitler's Atlantic Wall, The 1st Assault Brigade Royal Engineers on D-Day by Richard C. Anderson provided very detailed information on the brigade's personnel and equipment that were involved in the invasion. The numerous titles self-published by Malcolm A. Beilis contain mountains of information on the composition of brigades and other formations at different times and also provides accurate representations of formation badges, arm of service colours and unit serial numbers. Of the more recent titles Churchill Tank 1941-1956, All Models, Owners Workshop Manual by Nigel Montgomery was enormously helpful. I was also able to acquire copies of the unofficial unit histories of 79th Armoured Division, 34th Armoured Brigade and 9th Royal Tank Regiment which were essentially published for veterans of those formations but contain a wealth of

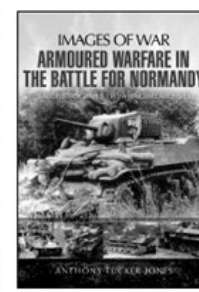
detailed information. As always, B.T. White's British Tank Markings and Names was an invaluable fa 11 back. I also referred to my own works on British armoured vehicles and formations and the additional research that I have undertaken since those titles were first published. Of the online resources I would thoroughly recommend Chris Shilito's Armour In Focus website which contains information not found elsewhere and debunks a number of myths and misconceptions. I should also acknowledge the contributors to Brett Green's Missing Lynx discussion forum and Peter Brown whose research was used in the allocation tables. I would also like to acknowledge the work of George Bradford on whose plan drawings a number of the illustrations are based. I would like to thank the modellers who graciously allowed me to publish the images of their work, particularly Marcos Serra who has devoted himself to modelling the Churchill tank. Of the product manufacturers I would like to express a special thanks to Sheng Hui of ROCHM, Jan Zdiarsky from Eduard Accessories and Freddie Leung of Dragon Models who all helped enormously. I am indebted to Karl Berne, J.Howard Parker and Ian Carter of the IWM for their invaluable assistance with the photographs and period insignia. Lastly I wish to thank my editors at Pen & Sword, Rupert Hardingand Stephen Chumbley, for their advice and assistance.

## *FURTHER READING*



The aim of this innovative new series is to provide modelmakers and tank enthusiasts with a new standard of primarily visual reference of both full-size tanks and their scale models. Each book

will contain detailed technical information imparted through drawings and photographs while the meticulously researched full-colour profiles will provide a complete reference for paint schemes and markings. In addition every volume of the TankCraft series will feature summaries of design histories and operational careers, and reviews of available kits. Each book is devoted to an iconic tank type - chosen for its popularity as a modelling subject - and the series will provide coverage across a range of different criteria, showcasing the best of the world's tank types and providing invaluable insight and guidance for modelmakers.

***Number 2 in the TankCraft series***

## SHERMAN TANKS

**BRITISH ARMY AND ROYAL MARINES**

**NORMANDY CAMPAIGN 1944**

***Dennis Oliver***

The Sherman tank was eventually in service with most Allied armies of the Second World War and by the time of the Normandy landings was the mainstay of Britain's armoured battalions. In this second book in the TankCraft series, Dennis Oliver uses wartime photos and extensively researched, exquisitely presented colour illustrations to cover the Sherman tanks used by the units of the Royal Armoured Corps and the Royal Marines during the fighting in northern France. A large part of this work showcases available model kits and aftermarket products, complemented by a gallery of beautifully constructed and painted models.

# SHERMAN TANKS

TANK CRAFT

BRITISH ARMY AND ROYAL MARINES
NORMANDY CAMPAIGN 1944

*Photographed in the shattered village of Maltot, on the south-western outskirts of Caen, in late July this Churchill Mk IV (75mm) may be from either 7th or 9th Battalion of the Royal Tank Regiment both of which suffered heavy casualties here in an attempt to capture Hill 112. Note the lengths of track taken from a German tank welded to the lower front hull.*